TRAVEL TRAILER/FIFTH WHEEL
Owners Manual

FOREST RIVER, INC.
Recreational Vechicles

Welcome Home!

WELCOME to the Forest River family and thank you for selecting a Forest River, Inc. product. Congratulations for choosing a lifestyle that will provide you the freedom to enjoy recreation wherever you may choose.

This owner's manual is designed as a *Quick Reference* guide for the operation and care of your new purchase. For more complete instructions regarding safety, maintenance and operation of the items used in the manufacturing of your RV, carefully read the booklets supplied by the component manufacturers. All information contained in this manual may not relate to your specific model, however booklets supplied by the component manufacturers and included in your Owner's packet will provide any additional information needed.

Your dealership personnel should be able to answer any questions or concerns you may have regarding your new product. If your dealer is unable to do so, please feel free to contact our Customer Service department for assistance. Your dealership will provide you with the appropriate contact information.

Your recreational vehicle was built using the high standards set by Forest River Inc. and following the strict guidelines set forth by the Recreational Vehicle Industry Association, (RVIA), as well as complying with the requirements of all applicable state and federal agencies.

Please carefully read the Limited Warranty in the front of this manual. Forest River, Inc. has no other expressed or implied warranties of any type. You, as the owner, are responsible for providing proper maintenance as outlined in this manual and as set forth in the component manufacturers booklets.

FAILURE TO PROPERLY MAINTAIN YOUR UNIT COULD RESULT IN LOSS OF WARRANTY COVERAGE.

Several of our component manufacturers carry their own warranty and require separate warranty information to be filed with them. Please read all component manufacturers owner's manuals provided with your RV and file appropriate individual warranty cards as required.

You have joined an elite group and as you begin making great memories using your new Forest River RV, we wish you many exciting and adventurous days of RV camping.

Travel Safely and...

Go RV'ing!

LIMITED WARRANTY TOWABLE PRODUCTS **FOREST RIVER INC.**
RECREATIONAL VEHICLES BY FOREST RIVER INC.

Thank you for choosing to purchase a Recreational Vehicle by Forest River Inc., a fine product in which design and construction have received the care that quality demands. This important warranty covers many items and is indicative of our desire to stand behind our products and assure our customers' complete satisfaction.

WARRANTY COVERAGE

SUMMARY OF WARRANTY: Forest River Inc., 55470 CR 1, P.O. Box 3030, Elkhart, Indiana 46515-3030 (Warrantor) warrants to the ORIGINAL CONSUMER PURCHASER ONLY, when purchased from an authorized Forest River Inc. dealer, for a period of (1) one year from date of purchase (Warranty Period), that the body structure of this recreational vehicle shall be free of substantial defects in materials and workmanship attributable to Warrantor.

EXCLUSIONS FROM THIS WARRANTY: Warrantor expressly disclaims any responsibility for damage to the unit where damage is due to condensation, normal wear and tear or exposure to elements. Warrantor makes no warranty with regard to, but not limited to, the chassis including without limitation, any mechanical parts or systems of the chassis, axles, tires, tubes, batteries and gauges, routine maintenance, equipment and appliances, or audio and/or video equipment. Their respective manufacturers and suppliers may warrant some of these items. Warranty information with respect to these items is available from your dealer.

The Warrantor further makes no warranty with regard to any product used for commercial purposes, as a permanent residence or as a rental unit, or any product not registered and normally used in the United States or Canada.

LIMITATION AND DISCLAIMER OF WARRANTIES: WARRANTOR EXPRESSLY LIMITS THE DURATION OF ALL EXPRESS AND IMPLIED WARRANTIES OF MERCHANTABILITY AND ALL IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE EXCEPT IN THOSE STATES THAT DO NOT ALLOW THIS EXCLUSION. WARRANTOR EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AFTER EXPIRATION OF THE WARRANTY PERIOD. No action to enforce express or implied warranties shall be commenced later than (90) ninety days after expiration of the warranty period. There is no warranty of any nature made by the Warrantor beyond that contained in this Warranty. No person has authority to enlarge, amend or modify this Warranty, except this Warrantor.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

No action to enforce express or implied warranties shall be commenced without prior written notice to the manufacture and/or warrantor at the address listed above of the alleged defect or nonconformity or the authorized repair facility's failed repair attempt and MANUFACTURE, AT ITS DIRECT OPTION, shall have a final opportunity to remedy.

DISCLAIMER OF CONSEQUENTIAL AND INCIDENTAL DAMAGES: THE ORIGINAL CONSUMER PURCHASER OF THIS RECREATIONAL VEHICLE AND ANY PERSOIN TO WHOM THIS UNIT IS TRANSFERRED, AND ANY PERSON WHO IS INTENDED OR UNINTENDED USER OR BENEFICIARY OF THIS UNIT SHALL NOT BE ENTITLED TO RECOVER FROM WARRANTOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

WARRANTOR'S OBLIGATIONS: Warrantor will remedy substantial defects in materials and workmanship caused by Warrantor. Warrantor shall elect to remedy the defect from among the following: repair, replacement or refund. Warrantor may not elect refund unless the Purchaser agrees, or the Warrantor is unable to provide replacement and repair is not commercially practicable. Warranty performance can only be obtained at Warrantor's authorized dealers and service centers and from Warrantor, at the discretion of the Warrantor. All costs incurred in transporting this recreational vehicle for warranty service shall be borne by Purchaser. Warrantor shall remedy the defect within a reasonable amount of time, after appointment and delivery by Purchaser. All of Warrantor's expenses in remedying the defect shall be borne by the Warrantor.

PURCHASER'S OBLIGATIONS: Purchaser must complete, sign and return the owner's registration within (10) ten days of purchase to validate this Warranty. The return of this registration is a condition precedent to warranty coverage; failure to return the completed registration to the Warrantor will invalidate this warranty. Purchaser shall deliver this recreational vehicle for warranty service within a reasonable time after discovery of the defect and in no event after expiration of the Warranty period, which Warranty Period is (1) one year. All expenses incurred by Purchaser in obtaining warranty service shall be borne by Purchaser. . Warranty service shall, whenever possible, be scheduled with the selling dealer, by an appointment in order to avoid possible delays. Purchaser can, if necessary, obtain a list of persons authorized to perform warranty service by contacting Warrantor at the above address. **No action to enforce express or implied warranties shall be commenced without prior written notice to the manufacture and/or warrantor at the address listed above of the alleged defect or nonconformity or the authorized repair facility's failed repair attempt and MANUFACTURE, AT ITS DIRECT OPTION, shall have a final opportunity to remedy.**

EVENTS DISCHARGING WARRANTOR FROM OBLIGATION UNDER THIS WARRANTY: Misuse or neglect, including failure to provide reasonable and necessary maintenance, unauthorized alteration, accident, and improper loading, use as a permanent residence, commercial use or leasing of the recreational vehicle shall discharge Warrantor from any obligation under this Warranty.

PARTS AND DESIGN CHANGES: Warrantor reserves the right to change the parts and design of its recreational vehicle from time to time without notice and with no obligation to maintain spare parts or make corresponding changes in its products previously manufactured.

OBTAINING WARRANTY SERVICE: To insure your local dealer's personal interest in your complete satisfaction, it is recommended that all warranty service, be performed by the authorized dealer from whom you purchased your unit. Following a move or as you are traveling, should warranty service become necessary, such service shall be performed by any authorized dealer in the United States or Canada. Such service shall also, whenever possible, be scheduled by an appointment, in order to avoid possible delays.

WARRANTY REGISTRATION: A warranty registration is to be completed by the owner at the time of purchase and returned to the Warrantor. The return of this registration is a condition precedent to warranty coverage; failure to return the completed registration to Warrantor will invalidate this Warranty.

OTHER WARRANTIES: As indicated in the paragraph above, entitled 'Exclusions From This Warranty', certain items that are not covered by this Warranty may be warranted separately by their manufacturers or suppliers. In order to validate those warranties, you may also be required to complete and return to the appropriate manufacturer the warranty forms included with the information package. These other warranties may cover, but are not limited to, such items as chassis, axles, tires, tubes, batteries, optional generators, and appliances, which are not covered by this Limited Warranty. For service or parts required for these products it may be necessary to write or call the product manufacturer to obtain the nearest authorized service center location. In requesting parts for separately warranted products from the manufacturer of the product or its authorized service center it may also be necessary to first obtain a warranty work authorization number before the work is done. It may also be necessary to provide the Product Name, Model and Serial Number along with the description of the problem and part needed, plus shipping instructions. See these warranties with respect to their terms and conditions.

OWNER ASSISTANCE: Your confidence and good will are important to Forest River Inc., as is maintaining a pleasant relationship with our dealers. We at Forest River, recognize that there may be occasions when a warranty or service problem is not handled to your satisfaction, resulting in misunderstandings**. After discussing the situation with the dealership management, if your problem has not been resolved to your satisfaction, we welcome you to contact the Forest River Customer Service Manager, at the address listed above, Our recommendations for an agreeable solution will be communicated to the local dealer,**

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.

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LEGEND

Listed below are symbols and descriptions you will find throughout this manual. They are used to alert you to possibly dangerous or hazardous situations. When you see these symbols, please read them carefully and follow the instructions to help prevent damage to your recreational vehicle and for your personal safety.

DANGER! (Indicates a hazardous situation which, if not avoided, will result in death or serious injury.) This sign is commonly **RED.**

WARNING (Indicates a hazardous situation which, if not avoided, could result in death or serious injury.) This sign is commonly **ORANGE**.

CAUTION (Indicates a hazardous situation which, if not avoided, could result in vehicle damage or minor to moderate injury.) This sign is commonly **YELLOW**.

COMPONENT MANUFACTURERS

Antennas	Winegard	800-288-8094	www.winegard.com
Apollo Microwaves	Midwest Sales	800-772-7262	N/A
Awnings	Carefree of Colorado	800-621-2617	www.carefreeofcolorado.com
Awnings	Dometic	800-544-4881	www.dometicusa.com
Axle Assembly	Alko-Kober	574-294-6651	www.al-kousa.com
Axle Assembly	Lippert	866-524-7821	www.lci1.com
Central Vacuum system	HP Products		N/A
Euro Chair Leather	Partner Supply	574-266-8400	N/A
Fireplace	National Supply	574-295-9200	www.nationalsupplyllc.com
Frames FW & TT	Lippert	866-524-7821	www.lci1.com
Furnace	Atwood	815-877-5700	www.atwoodmobile.com
Furnace	Suburban	800-659-2138	www.suburbanmfg.com
Furniture	Mastercraft	260-463-8702 x. 243	www.rvseating.com
Generator	Generac	574-293-6503	www.guardiangenerators.com
Generator	Onan	800-888-6626	www.cumminsonan.com
Goodyear Tires & Rims	Tredit Tire & Wheel	574-293-0581	www.tredittire.com
Hitch Pin Box	Trail Air	800-998-4238	www.trailair.com
Landing Gear	Lippert	866-524-7821	www.lci1.com
Microwaves	Amana	866-524-7821	www.amana.com
Microwaves	GE	800-432-2737	www.geappliances.com
Microwaves	Magic Chef	800-688-1120	www.magicchef.com
Power Converter	Cheng/ WFCO	877-294-8997	N/A
Power Converter	Parallax	800-443-4859	www.parallaxpower.com
Ranges	Maytag/ Whirlpool	800-545-9086 (PROMPT #5)	www.whirlpoolcorp.com
Recliner, La-Z-Boy	West Side Furniture	574-533-9545	N/A
Refrigerators	Dometic	800-544-4881	www.dometicusa.com
Refrigerators	Norcold	800-543-1219	www.thetford.com
Roof A/C	Dometic	800-544-4881	www.dometicusa.com
Roof Vent	Fantastic Vent	800-521-0298	www.fantasticvent.com
Rubber Roof & Sealant	Alpha Systems	800-462-4698	www/alphasystemsinc.com
Rubber Roof & Sealant	Dicor	574-264-2699	www.dicor.com
Satelite	King Dome	800-982-9920	www.kingcontrols.com
Satelite	KVH	401-847-3327	www.kvh.com
Shades	Irvine Shade	574-522-1446	N/A
Slide Out assemblies	Lippert	866-524-7821	www.lci1.com
Slide Out assemblies	Power Gear	888-239-2537	www.powergearus.com
Slide out toppers	Dometic	800-544-4881	www.dometicusa.com
Stabalizing Jacks	Lippert	866-524-7821	www.lci1.com
Tires & Rims	Carlisle	800-260-7959	www.carlisletore.com
Tires & Rims	RFD Corporation	574-295-3939	N/A
Toilet	Sealand	800-321-9886	www.sealandtechnology.com
Toilet	Thetford	800-543-1219	www.thetford.com
Washer/ Dryer	Majestic	800-678-8002	www.majesticappliances.com
Water Heater	Suburban	800-659-2138	www.suburbanmfg.com
Water pump	Shurflo	574-262-0478	www.shurflo.com
Windows	Kinro	574-533-8337	www.kinro.com

SECTION 1
CUSTOMER INFORMATION

MANUFACTURER'S WARRANTIES
The following list of components has been compiled to help you know which products installed on your recreational vehicle may have their own warranties. If you have any of these components on your RV, be sure to check the manufacturer's literature supplied with your RV Owner's packet to confirm whether they require you to register your purchase with them to validate their warranty. These warranties usually apply only to the first owner of the recreational vehicle. We recommend that you send the various warranty registration cards immediately before any time constraints on registration expire.

Manufacturer's literature is supplied by each individual company according to the specific items used in the production of your RV. This information is part of the Owner's packet you received with your RV. Only those products which are used on your unit will be included in this packet.
Inspect this literature with your dealer during the pre-delivery inspection and report any literature shortage to the dealer at that time.

TAKING DELIVERY
There are two forms the dealer will complete concerning your new recreational vehicle. The PDI (Pre-delivery Inspection sheet) and the Warranty Registration form. If you do not have a copy in your Owners Packet, request a copy of these forms for your records. They are an important part of the history of your RV. A qualified dealer representative will perform a 'walk-through' demonstration which will provide you with important information regarding the operation of your unit. Be sure you fully understand the information given and the proper functioning of your unit to insure you have the best camping experience possible. Your dealer will fully explain all the system functions and will supply component information for items used in the manufacture of your recreational vehicle.

Making a Service Appointment
When you call to schedule your appointment, have the following information available:

1.) RV Identification Number (17 letters and digits, sometimes referred to as a serial number).
2.) Type of unit (for example, 2008 Cherokee Wolf Pack fifth wheel).
3.) Date of purchase.
4.) Description of the problem.
5.) History or repairs and repair center location (where the repairs were performed).
6.) A calendar with your schedule noted, for convenience in coordinating a service date that works for you and the repair center.

Organize
Planning ahead and being prompt when having service is beneficial for all. When someone misses their appointment, or arrives late, it disrupts the service schedule for the entire day. Please be courteous, and drop your unit off at the scheduled time, and on the scheduled date. Have a list ready, be specific, and be reasonable with your expectations. Some repairs may require special order parts.

Waiting at the Repair Facility
For safety reasons, most insurance policies prohibit non-employee personnel to be in the work area. If it is necessary for you to wait until the repairs are completed, most dealers provide you with a safe, comfortable customer lounge.

SECTION 1
CUSTOMER INFORMATION

DEALER RESPONSIBILITIES

1. The dealership is responsible for inspecting both factory and dealer installed components for proper operation. This is known as the pre-delivery inspection and systems check.

2. Your dealer is required to provide a thorough and complete walk-through demonstration.This demonstration should provide a good understanding of how your new RV operates.

3 The owner's information packet should be presented at this time. This information should include all warranty cards, component information, operation and maintenance instructions relating to your new unit.

4. All component warranty forms should be discussed and/or completed at this time. Your selling dealer should assist you in understanding any and all limited warranty provisions, to help you avoid loss of warranty for any reason. Be sure you understand the Optional 2nd Year Protection Plan offered by Forest River. (Not offered on all models.) Ask any questions you may have before leaving the dealership.

5. Your dealer should provide you with information concerning any need for service for your unit, whether in or out of their area. They should provide contact numbers for the dealership both during and after hours, along with contact information for the correct Forest River division.

OWNER RESPONSIBILITIES

1. Regular and proper maintenance. As the owner, you have the responsibility to properly maintain your recreational vehicle. Be sure you have service performed in a timely manner, don't ignore a problem. It isn't always necessary to take your unit to a service center; sometimes a phone call is all that's needed. The service technicians can advise you.

2. Familiarize yourself with your RV. Observe all the component manufacturers instructions regarding the use and service of their products.

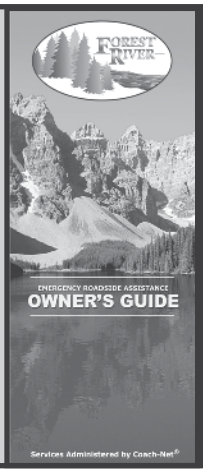
3. Complete and send in all the warranty cards. Doing so may help you avoid conditions arising from neglect that are not covered under warranty.

NOTE: MODIFICATIONS TO YOUR RV, WITHOUT WRITTEN AUTHORIZATION FROM FOREST RIVER INC., COULD RESULT IN REDUCTION OR LOSS, OF WARRANTY COVERAGE. CONTACT YOUR DEALER BEFORE MAKING SUCH CHANGES.

Coach-Net®
Technical & Roadside Assistance

WHEN YOU TAKE DELIVERY OF YOUR NEW FOREST RIVER INC. RECREATIONAL VEHICLE, YOU ARE PROVIDED WITH AN EMERGENCY ROADSIDE ASSISTANCE SERVICE - FREE. WE'VE TEAMED UP WITH THE LARGEST RV EMERGENCY ROADSIDE ASSISTANCE COMPANY IN THE COUNTRY, TO GIVE YOU IMMEDIATE ACCESS TO FAST, DEPENDABLE SERVICE WHEN AND WHERE YOU NEED IT. THIS IS A COMPREHENSIVE EMERGENCY ROADSIDE SERVICE THAT IS AVAILABLE TO YOU 24/7, AROUND THE CLOCK.

FOR COMPLETE DETAILS REGARDING HOW TO ACCESS YOUR FOREST RIVER EMERGENCY ROADSIDE ASSISTANCE AND PRODUCT SUPPORT PLAN BENEFITS, CALL 1-877-801-0333, OR SEE THE INFORMATION IN THE BACK OF THIS MANUAL



OWNER RESPONSIBILITIES CON'T'D.

The following is a list of suggestions to assist you in avoiding most warranty issues:

1. Read your warranties and review them with your selling dealer. The dealer's obligation is to educate you regarding the proper and safe operation of your RV and all its' components.
2. Be sure to inspect the entire unit and note any service issues.
3. Locate all paperwork and ask any questions you may have before leaving the dealership.

NOTE: FOREST RIVER INC. WANTS YOU TO HAVE THE BEST POSSIBLE ADVENTURE WITH YOUR NEW RV. TO GET THE MOST ENJOYMENT OUT OF YOUR NEW RV AND TO INSURE YOU FULLY UNDERSTAND HOW YOUR NEW RECREATIONAL VEHICLE OPERATES, PLEASE ADDRESS IMMEDIATELY, ANY QUESTIONS OR CONCERNS YOU MAY HAVE REGARDING YOUR RV WITH YOUR DEALER BEFORE USING YOUR UNIT FOR THE FIRST TIME.

NOTE: USE YOUR NEW RECREATIONAL VEHICLE RESPONSIBLY. YOUR CAMPER WAS NOT DESIGNED TO BE USED AS A PERMANENT DWELLING, BUT FOR SHORT TERM AND RECREATIONAL USE. IF YOU INTEND TO USE YOUR RV AS PERMANENT HOUSING, BE ADVISED THAT IT COULD CAUSE PREMATURE WEAR ON YOUR APPLIANCES, FURNACE, WATER SYSTEMS, CARPET, DRAPES, UPHOLSTERY, BEDDING AND INTERIOR SURFACES. THIS PREMATURE WEAR CAUSED BY PERMANENT RESIDENCY MAY BE CONSIDERED *ABNORMAL OR ABUSIVE USE,* AND COULD REDUCE OR IN SOME CASES, VOID YOUR WARRANTY COVERAGE.

NOTE: IF YOU HAVE REPAIRS PERFORMED BY A NON-FOREST RIVER REPAIR CENTER, YOU STILL MUST RETURN THE DEFECTIVE PART TO FOREST RIVER TO BE CONSIDERED FOR WARRANTY REPAIR REINBURSEMENT.

THE FOLLOWING IS ADDED AS A REQUIREMENT OF THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION (NHTSA).

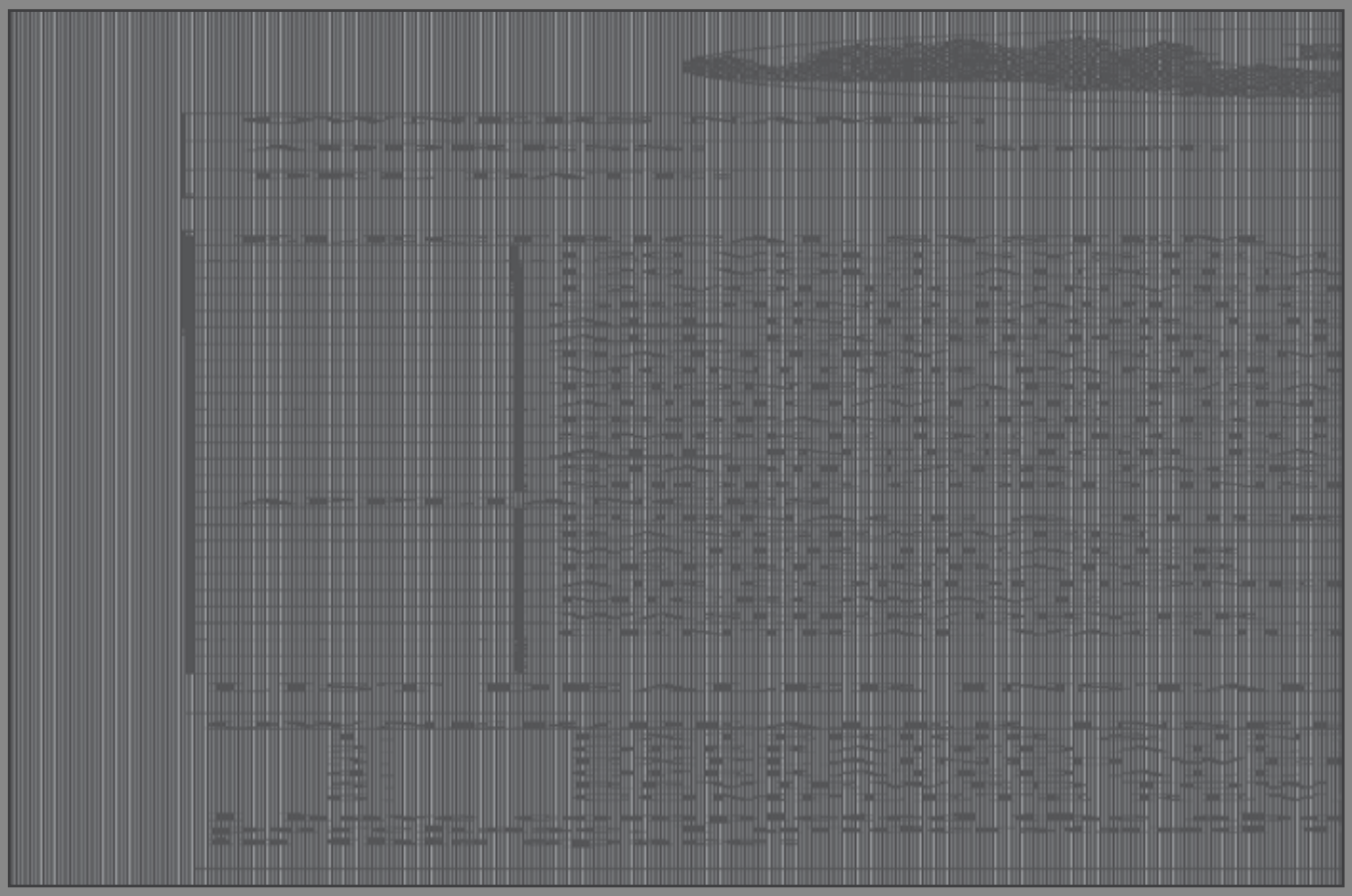
IF YOU BELIEVE THAT YOUR VEHICLE HAS A DEFECT WHICH COULD CAUSE A CRASH OR COULD CAUSE INJURY OR DEATH, YOU SHOULD IMMEDIATELY INFORM THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION (NHTSA) IN ADDITION TO NOTIFYING THE MANUFACTURER.

IF NHTSA RECEIVES SIMILAR COMPLAINTS, IT MAY OPEN AN INVESTIGATION AND IF IT FINDS THAT A SAFETY DEFECT EXISTS IN A GROUP OF VEHICLES, IT MAY ORDER A RECALL AND REMEDY CAMPAIGN. HOWEVER, NHTSA CANNOT BECOME INVOLVED IN INDIVIDUAL PROBLEMS BETWEEN YOU, YOUR DEALER, OR THE MANUFACTURER.

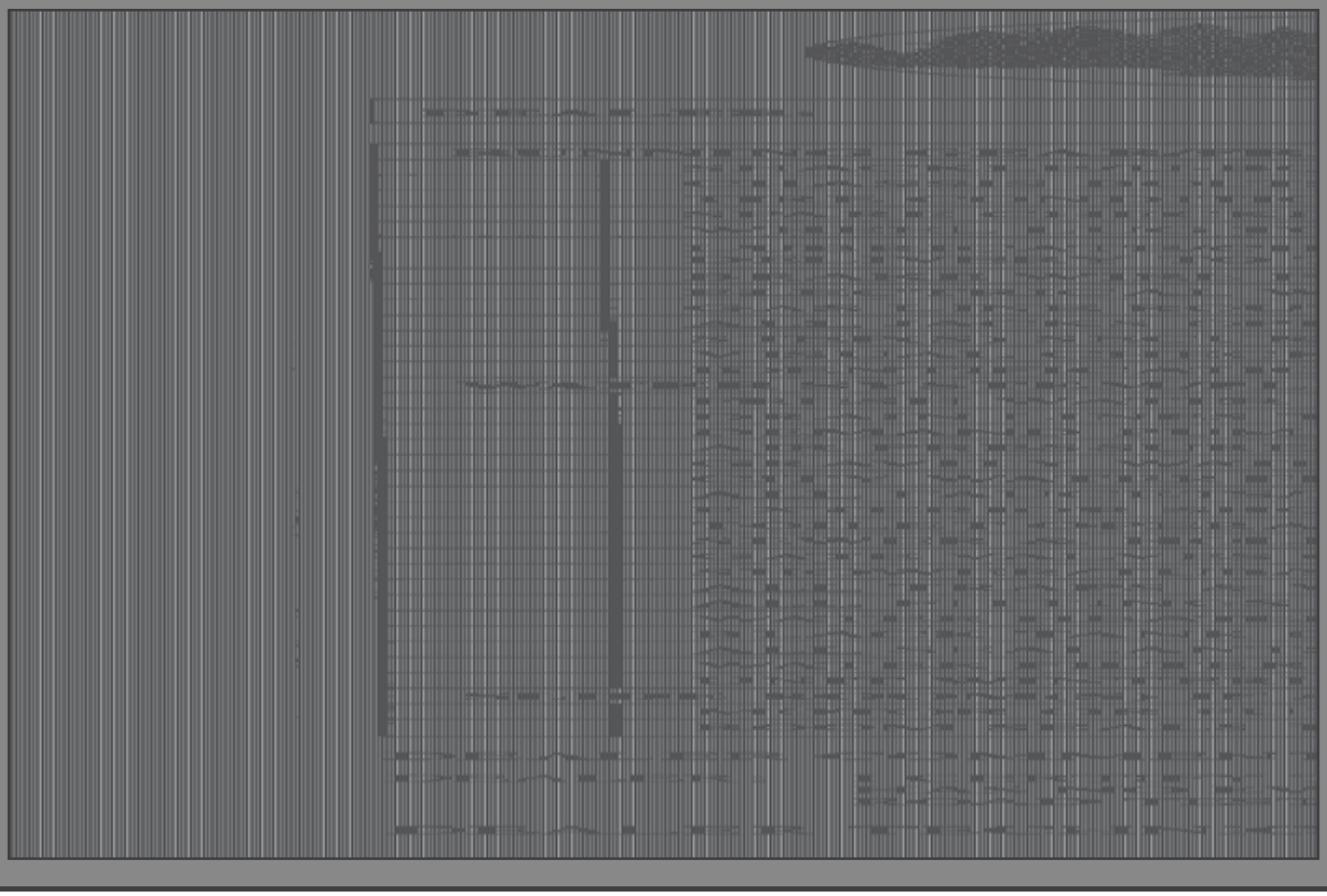
TO CONTACT NHTSA, YOU MAY EITHER CALL THE AUTO SAFETY HOT LINE, TOLL-FREE AT 1-888-327-4236, HEARING IMPAIRED, 1-800-424-9153, (OR 366-0123 IN WASHINGTON, D.C. 20590.) YOU CAN ALSO OBTAIN ADDITIONAL INFORMATION ABOUT VEHICLE SAFETY FROM THEIR WEBSITE, http://www.safercar.gov.

NOTES:

WARRANTY REGISTRATION



PRE-DELIVERY FORM



SECTION 2
IDENTIFICATION AND SAFETY

Recreational Vehicle Serial Number, Decals and Data Plates

The recreational VIN, (vehicle identification number), label is mounted on the front lower roadside corner of a Travel Trailer or Fifth Wheel.

The VIN is a computer generated number based upon pertinent facts about your RV. For example:

4x4	F	CA	M	2	1	8	G	12345
1	2	3	4	5	6	7	8	9

1. WORLD IDENTIFIER
4x4 - Forest River

2. UNIT TYPE
T-Travel Trailer
F-Fifth Wheel

3. Brand
WC-Wildcat
CA-Cardinal

4. UNIT LENGTH (FT.)
A-24, B-26, C-27, D-28
E-29, F-30, G-31, H-32
J-33, K-34, L-35, M-36
N-37, P-38, R-39, S-40,
T-18, U-19, V-20, W-21,
X-22, Y-23, Z-24

5. NUMBER OF AXLES
0-None, 1-1 Axle, 2-2 Axles

6. COMPUTER GENERATED DIGIT (for security purposes)

7. MODEL YEAR
T-1996, V-1997, W-1998, X-1999,
Y-2000, 1-2001, 2-2002, 3-2003
4-2004, 5-2005, 6-2006, 7-2007
8-2008

8. PLANT LOCATIONS
F-914 CR 1, Elkhart, In.
G-52277 DR 19, Elkhart, In.
V-57475 CR 3, Elkhart, In.

9. SEQUENTIAL SERIAL #
Assigned at point of manufacture

IMPORTANT: Always give model, year and the V.I.N. (vehicle identification number) information when ordering parts. Also, we recommend that you keep a copy of that information separate from the recreational vehicle in the event of theft or vandalism. You may be required to supply a copy of this information to the authorities.

A vehicle data card is also supplied with your recreational vehicle listing manufacturer, model, and serial number information for major factory installed appliances and accessories. A separate copy of this information could be useful to you in the event of theft, vandalism or disaster and also when certain service functions may require it.

Decals and data plates placed throughout the recreational vehicle aid in its' safe and efficient operation, others give service instructions. Read all decals, data and instruction plates before operating your recreational vehicle. If any decal, data or instruction plate is damaged, painted over or removed, it should be replaced.

RECREATIONAL VEHICLE SERIAL NUMBER LABEL

MANUFACTURED BY / FABRIQUE PAR: DATE

GVWR / PNBV KG (LB)
GAWR (EACH AXLE) PNBE (CHAQUE ESSIEU) KG(LB) TIRES / PNEU
RIMS / JANTE

COLD INFL. PRESS. / PRESS. DE GONFL. A FROID KPA (PSI / LPC) ☐ SINGLE ☐ DUAL

THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE. THIS VEHICLE CONFORMS TO ALL APPLICABLE STANDARDS PRESCRIBED UNDER THE CANADIAN MOTOR VEHICLE SAFETY REGULATIONS IN EFFECT ON THE DATE OF MANUFACTURE.

CE VEHICULE EST CONFORME A TOUTES LES NORMES QUI LUI SONT APPLICABLES EN VERTU DU REGLEMENT SUR LA SECURITE DES VEHICULES AUTOMOBILES DU CANADA EN VIGUEUR A LA DATE DE SA FABRICATION.

V.I.N. / N.I.V.: TYPE/TRAILER TRA/REM FD-306 REV A

SECTION 2
IDENTIFICATION AND SAFETY

SAFETY REGULATIONS FOR LP

The following warnings are posted throughout your recreational vehicle to provide information on LP gas safety. They have been installed not only because of the requirement to do so, but also as a constant reminder to occupants of the recreational vehicle to exercise proper caution when using or being around LP gas appliances and equipment. We are listing them here so you may study them and be sure that you and your family understand and follow them.

⚠WARNING **LP GAS CONTAINERS SHALL NOT BE PLACED OR STORED INSIDE THE LIVING AREA OF A RECREATIONAL VEHICLE. LP GAS CONTAINERS ARE EQUIPPED WITH SAFETY DEVICES WHICH RELIEVE EXCESSIVE PRESSURE BY DISCHARGING GAS INTO THE ATMOSPHERE.**

⚠WARNING **IT IS NOT SAFE TO USE COOKING APPLIANCES FOR COMFORT HEATING.**

Cooking appliances need fresh air for safe operation. Before operation:

1. Open overhead vent or turn on exhaust fan, **AND**
2. Open a window

A warning label is located in the cooking area to remind you to provide an adequate supply of fresh air for combustion. Unlike homes, the amount of oxygen supply is limited due to the size of the recreational vehicle, and proper ventilation when using the cooking appliance(s) will avoid dangers of asphyxiation.

DANGER **IT IS ESPECIALLY IMPORTANT THAT COOKING APPLIANCES NOT BE USED FOR COMFORT HEATING AS THE DANGER OF ASPHYXIATION and/or CARBON MONOXIDE POISONING IS GREATER WHEN THE APPLIANCE IS USED FOR PROLONGED PERIODS OF TIME.**

⚠WARNING **DO NOT STORE LP GAS CONTAINERS, GASOLINE, OR OTHER FLAMMABLE LIQUIDS INSIDE THE VEHICLE AS A FIRE OR EXPLOSION MAY RESULT.**

A WARNING LABEL HAS BEEN LOCATED NEAR THE LP GAS CONTAINER. This label reads:

⚠WARNING **DO NOT FILL CONTAINER(S) TO MORE THAN 80 PERCENT CAPACITY**

Over-filling the LP gas container can result in uncontrolled gas flow which can cause fire or explosion. A properly filled container will contain approximately 80 percent of its' volume as liquid LP gas. An 80 percent automatic shut-off valve has been installed on the LP gas tank which will automatically prevent further filling when the gas volume has reached 80 percent of tank capacity.

The following label has been placed in the vehicle near the range area:

IF YOU SMELL GAS:

- Extinguish any open flames, pilot lights and all smoking materials.
- **DO NOT** touch electrical switches.
- Shut off the gas supply at the tank valve(s) or gas supply connection.
- Open doors and other ventilating openings.
- **DO NOT USE THE RANGE HOOD.**
- Leave the area until the odor clears.
- Have the system checked and leakage source corrected before using again.

SECTION 2
IDENTIFICATION AND SAFETY

FIRE SAFETY

Fire safety is an important part of owning a recreational vehicle. The following basic rules of fire prevention can help eliminate the possibility of a fire.

1. Never store flammable liquids in the recreational vehicle
2. Never leave cooking food unattended
3. Never smoke in bed and always use an ashtray
4. Never allow children to play with LP gas or electrical equipment
5. Never use an open flame as a flashlight
6. Have faulty or damaged wiring and electrical components repaired immediately
7. Never overload electrical circuits
8. Locate any LP leaks and have them repaired immediately
9. Keep cooking surfaces clean and free from debris
10. Don't allow rubbish to accumulate
11. Never clean with a flammable substance
12. Spray fabrics annually with a flame retardant

SAFETY TIPS

BE SURE THAT EVERYONE IN YOUR RV IS FAMILIAR WITH THE LOCATION OF ALL EXITS, INCLUDING EXIT WINDOWS.

⚠WARNING **BE SURE THAT EVERYONE IN YOUR RV IS FAMILIAR WITH THE OPERATION AND LOCATION OF FIRE EXTINGUISHERS.**

EXIT Evacuate everyone from the recreational vehicle immediately.

DO NOT ATTEMPT TO USE WATER TO PUTOUT A FIRE. Water can spread some types of fire and electrocution is possible. Get everyone outside, then determine if you should attempt to extinguish the fire. If it is a large fire or a chemical fire, **DO NOT HESITATE !** Leave the vehicle immediately and call the fire department.

⚠WARNING **LP GAS REGULATORS MUST ALWAYS BE INSTALLED WITH THE DIAPHRAGM VENT FACING DOWNWARD. REGULATORS THAT ARE NOT IN COMPARTMENTS HAVE BEEN EQUIPPED WITH A PROTECTIVE COVER. BE SURE THAT THE REGULATOR VENT FACES DOWNWARD AND THE COVER IS KEPT IN PLACE TO MINIMIZE VENT BLOCKAGE WHICH COULD RESULT IN EXCESSIVE GAS PRESSURE CAUSING FIRE OR EXPLOSION.**

⚠WARNING **PORTABLE FUEL BURNING EQUIPMENT INCLUDING WOOD OR CHARCOAL BURNING GRILLS AND STOVES SHALL NOT BE USED INSIDE THE VEHICLE. DOING SO MAY CAUSE A FIRE, EXPLOSION, CARBON MONOXIDE POISONING, OR ASPHYXIATION.**

SECTION 2
IDENTIFICATION AND SAFETY

If you decide it is safe to fight a fire with an extinguisher:

- Remove the tamper tape which covers the discharge push button, (do not shake.)
- Hold it upright and stand six to ten feet from the fire, with a clear path to an exit.
- Press the button down completely, aiming at the base of the fire and spray with quick side to side sweeping motion.

TIP: Use the **'PASS**' method. Familiarize yourself and all RV occupants with this procedure:

- **P**ull the pin (some extinguishers may have a cartridge you need to push).
- **A**im the nozzle at the base of the fire.
- **S**queeze the handle to release the extinguishing agent.
- **S**pray the base of the fire. (If you aim at the flames, you won't extinguish the fire.)

AVOID INHALING THE DRY CHEMICALS FROM THE FIRE EXTINGUISHER. ALTHOUGH NON-TOXIC, THEY COULD CAUSE TEMPORARY IRRITATION. WHEN THE FIRE IS OUT, CLEAN THE AREA AS SOON AS POSSIBLE. THE DRY CHEMICALS MAY CAUSE SURFACE DAMAGE IF LEFT TOO LONG.

DO NOT USE WATER TO EXTINGUISH A FIRE. WATER CAN SPREAD SOME TYPES OF FIRE AND ELECTROCUTION IS POSSIBLE.

UNDERWRITER LABORATORIES CLASSIFY FIRES INTO THREE TYPES:

Class A: Fires in wood, paper, fabric, rubber and certain plastics.

Class B: Flammable liquids such as grease, cooking oils, gasoline or kerosene.

Class C: Electrical fires started from live electrical wires, shorted motors/switches.

NOTE: THE FIRE EXTINGUISHER PROVIDED WITH THE RECREATIONAL VEHICLE IS A CHEMICAL TYPE SUITABLE FOR EXTINGUISHING SMALL FIRES OF THE CLASS B OR C TYPE. EXTINGUISHERS ARE DESIGNED TO PUT OUT A FIRE IN IT'S INITIAL STAGE, NOT IF IT IS BLAZING OUT OF CONTROL. IF A FIRE CANNOT BE APPROACHED WITHIN 10 FEET WITHOUT THE RISK OF CAUSING PERSONAL HARM, IMMEDIATELY EVACUATE THE RV AND CALL 911.

'DANGER!' **INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.**
'CAUTION' **INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN MINOR OR MODERATE INJURY.**

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TIRE SAFETY

Use the following information to make tire safety a regular part of your vehicle maintenance routine.

Safety First-Basic Tire Maintenance

Properly maintained tires improve steering, stopping, traction, and load-carrying capability of your vehicle. Under inflated tires and overloaded vehicles are a major cause of tire failure. Therefore, to avoid flat tires and other types of tire failures you should maintain proper tire pressure, observe tire and vehicle load limits, avoid road hazards and regularly inspect your tires.

Finding Your Vehicle's Recommended Tire Pressure and Load Limits

The tire information and vehicle certification label contains information on tires and load limits. These labels indicate the vehicle manufacturer's information including:

- Recommended tire size
- Recommended tire inflation pressure
- Gross Vehicle Weight Rating (GVWR-the maximum occupant and cargo weight a vehicle is designed to carry)
- Front and rear gross axle weight ratings (GAWR-the maximum weight the axle systems are designed to carry.)

Understanding Tire Pressure and Load Limits

Tire inflation pressure is the level of the air in the tire that provides it with load-carrying capacity and affects the overall performance of the vehicle. The tire inflation pressure is a number that indicates the amount of air pressure, measured in pounds per square inch (psi)-a tire requires to be properly inflated. (This number is also expressed in kilopascals (kPa) which is a metric measuring system used internationally).

Vehicle manufacturers determine this number based on the vehicles' design load limit which is the greatest amount of weight a vehicle can safely carry and the vehicle's tire size. The proper tire pressure for your vehicle is referred to as the 'recommended cold inflation pressure'. Tire pressure should always be measured when the tire is 'cold' to get an accurate measurement. A cold tire is one that hasn't been driven on for at least 3 (three) hours. As you drive, your tires get warmer causing the air pressure within the tire to increase. Therefore, you can not get an accurate measurement of tire pressure unless the tire is cold.

NOTES:

Checking Tire Pressure

Because tires are designed to be used on more than one type of vehicle, tire manufacturers list the 'maximum permissible inflation pressure' on the sidewall. The number is the greatest amount of air pressure that should ever be put in the tire under normal driving conditions.

It is important to check your vehicle's tire pressure at least once a month for the following reasons:

- Most tires naturally lose air pressure over time.
- Tires can lose air suddenly if you drive over a pothole or strike the curb when parking.
- With radial tires it is usually not possible to determine under inflation by visual inspection.

For your convenience, purchase a tire pressure gauge to keep in your vehicle.

Tire Safety Tips

Preventing Tire Damage

- Slow down if you have to go over a pothole or other object in the road.
- Do not run over foreign objects in the roadway, and try not to strike the curb when parking.

Tire Safety Checklist

- Check tire pressure regularly (at least once a month), including the spare.
- Inspect tires for uneven wear patterns on the tread, cracks, foreign objects, or other signs of wear or trauma.
- Remove bits of glass and any other foreign objects wedged in the tread.
- Make sure your tire valves have valve caps.
- Check tire pressure before going on a long trip.
- Do not overload your vehicle. Check the tire information placard for the maximum recommended load for the vehicle.
- If you are towing a trailer, remember that some of the weight of the loaded trailer is transferred to the towing vehicle.

Tire Fundamentals

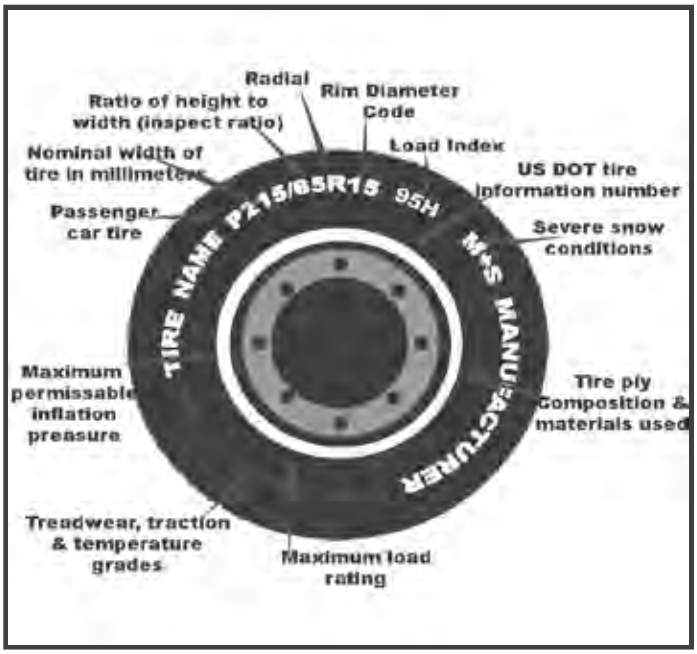
Federal law requires tire manufacturers to place standardized information on the sidewall of all tires. This information identifies and describes the fundamental characteristics of the tire and also provides a tire identification number for safety standard certification and in case of a recall.

MAINTENANCE TIP:

When a trailer is being stored for a prolonged period of time, follow the tips listed below to help prolong the life of your tires.

- Take the weight off the tires by putting the trailer on blocks.
- Reduce the air pressure in each tire.
- Protect your tires from the elements by keeping them covered.

When taking the trailer out of storage, inspect the tires thoroughly and be sure there are no cracks in the grooves and no wire showing. Cracks in the sidewall could indicate interior damage or separations in the tire.



P

Indicates the tire is for passenger vehicles.

Next (3 Digit) Number

Gives the width in millimeters of the tire from sidewall edge to sidewall edge. In general, the larger the number, the wider the tire.

Next (2 Digit) Number

Gives the tire's ratio of height to width, (known as the aspect ratio). Numbers of 70 or lower indicate a short sidewall for improved steering response and better overall handling on dry pavement.

R

'R' stands for radial. Radial ply construction of tires has been the industry standard for the past 20 years.

Next number

This two-digit number is the wheel or rim diameter in inches. If you change your wheel size, you will have to purchase new tires to match the new wheel diameter.

Next number

This two or three digit number is the tire's load index. It is a measurement of how much weight each tire can support. If you are unsure, contact a local tire dealer. Note: You may not find this information on all tires since it is not required by law.

M+S

'M+S' or 'M/S' indicates that the tire has some mud and snow capability. Most radial tires have these markings; hence, they have some mud and snow capability.

NOTES:

Q 99 mph	**H** 130 mph
R 106 mph	**V** 149 mph
S 112 mph	**W** 168 mph*
T 118 mph	**Y** 186 mph*
U 124 mph	

For tires with a maximum speed capability over 149 mph, tire manufacturers sometimes use the letters ZR. For those with a maximum speed capability over 186 mph, tire manufacturers always use the letters ZR.

IMPORTANT NOTE:
IF IT BECOMES NECESSARY TO REPLACE A TIRE AND YOU FEEL IT IS A WARRANTY ISSUE, MOST TIRE MANUFACTUERS REQUIRE THE D.O.T. NUMBER BE CUT OUT AND RETURNED TO THEM, WITH THE WARRANTY CLAIM, OTHERWISE THE WARRANTY COULD BE VOIDED.

U.S. DOT Tire Identification Number
This number begins with the letters “DOT” and indicates that the tire meets all federal standards. The next two numbers or letters are the plant code where it was manufactured, and the last four numbers represent the week and year the tire was built. For example, the numbers 3197 means the 31st week of 1997. The other numbers are marketing codes used at the manufacturer’s discretion. This information is used to contact consumers if a tire defect requires a recall.

Tire Ply Composition and Materials Used
The number of plies indicates the number of layers of rubber-coated fabric in the tire. In general, the greater the number of plies, the more weight a tire can support. Tire manufacturers also must indicate the materials in the tire, which include steel, nylon, polyester, and others.

Maximum Load Rating
Load rating indicates the maximum load in kilograms and pounds that can be carried by the tire.

Maximum Permissible Inflation Pressure
This number is the greatest amount of air pressure that should ever be put in the tire under normal driving conditions.

Speed Rating
Speed rating denotes the speed at which a tire is designed to be driven for extended periods of time. The ratings range from 99 miles per hour (mph) to 186 mph.
Note: This information may not appear on all tires since it is not required by law.

NOTES:

Treadwear Number
This number indicates the tire's wear rate. The higher the treadwear number is, the longer it should take for the tread to wear down. For example, a tire graded 400 should last twice as long as a tire graded 200.

Traction Letter
This letter indicates a tire's ability to stop on wet pavement. A higher graded tire should allow you to stop your car on wet roads in a shorter distance than a tire with a lower grade. Traction is graded from highest to lowest as 'AA', 'A', 'B', and 'C'.

Temperature Letter
This letter indicates a tire's resistance to heat. The temperature grade is for a tire that is inflated properly and not overloaded. Excessive speed, underinflation or excessive loading, either separately or in combination, can cause heat build-up and possible tire failure. From highest to lowest, a tire's resistance to heat is graded as 'A', 'B', or 'C'.

TIRE TIPS

Make sure all of the lug nuts are secure. Use a torque wrench. DO NOT guess.

Inspect tires for uneven wear patterns on the tread, for cracks, for foreign objects or for other signs of wear or trauma.

If you are towing a trailer, remember that some of the weight of the loaded trailer is transferred to the towing vehicle.

Trailers should have the wheel bearings repacked after being in storage for long periods of time.

CAUTION **DO NOT OVERLOAD YOUR VEHICLE. CHECK THE TIRE INFORMATION PLACARD FOR THE MAXIMUM RECOMMENDED LOAD FOR THE VEHICLE. NEVER EXCEED THE WHEEL MANUFACTURER'S RECOMMENDATIONS.**

⚠WARNING **IT IS IMPORTANT TO MAINTAIN PROPER WHEEL NUT TORQUE TO PROVIDE SAFE AND SECURE ATTACHMENT OF THE WHEEL TO THE HUB/DRUM.**

'CAUTION' INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT INVEHICLE DAMAGE OR PERSONAL INJURY.
'WARNING' INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.

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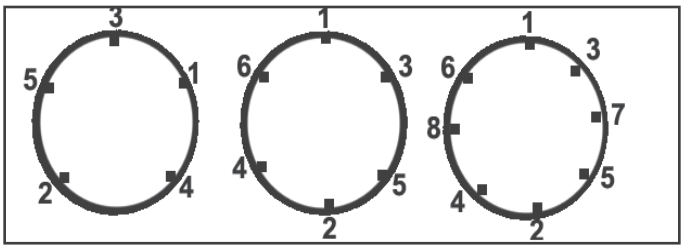
SECTION 2
IDENTIFICATION AND SAFETY



TIGHTEN EACH LUG NUT IN THE ORDER SHOWN IN THE CHART

TORQUE STAGES	
1ST STAGE	20 to 25 ft/lbs
2ND STAGE	55 to 60 ft/lbs
3RD STAGE	85 to 95 ft/lbs

NOTE: Start all lug nuts by hand to prevent cross threading. Wheel nut torque requirements vary depending on the size and manufacturer of the wheel. Always use the wheel manufacturers recommendation but do not exceed 120 ft/lbs on ½ inch studs. Unless otherwise specified by the wheel manufacturer, use a final torque of 85-95 ft/lbs.

NOTE: It is recommended that wheel bearings be repacked yearly.

⚠WARNING **BE SURE TO USE WHEEL NUTS THAT ARE COMPATIBLE WITH THE COIN IN THE WHEEL. IMPROPERLY TORQUED WHEEL NUTS CAN CAUSE THE WHEEL TO SEPARATE FROM THE WHEEL MOUNTING SURFACE DURIONG IPERATION. THIS COULD RESULT IN PROPERTY DAMAGE, SERIOUS PERSONAL INJURY OR LOSS OF LIFE.**

⚠WARNING **DO NOT PLACE A JACK AGAINST THE TRAILER UNDERBELLY WHEN CHANGING A TIRE. TO AVOID DAMAGE TO YOUR UNIT, BE SURE THE JACK IS PLACED FIRMLY AGAINST THE CHASSIS FRAME.**

END OF SECTION

'WARNING' **INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.**

NOTES:

SECTION 3

WEIGHT DISTRIBUTION, LOADING AND TOWING

CARGO CAPACITIES

Determining the weight of a vehicle includes more than understanding the load limits of the tires. A weight certification label, located on the forward half of the road side of the unit, will indicate the gross axle weight (GAWR). This is the most weight the fully loaded vehicle can weigh. If there are multiple axles, the GAWR of each axle will be provided. Look in your Yellow Pages under gravel pits, storage companies or recycling facilities to find certified scales. Call in advance to determine if they offer public weighing service, their fees, if any, and hours of operation.

NOTE: WHEN ESTABLISHING THE CARGO CAPACITY, WEIGH WITH ALL WATER TANKS AS EMPTY AS POSSIBLE. (DO NOT ALLOW ANYONE TO BE IN THE RECREATIONAL VEHICLE WHEN WEIGHING THE UNIT.)

NOTE: CARGO CAN BE ADDED TO THE VEHICLE UP TO THE MAXIMUM WEIGHT SPECIFIED ON THE WEIGHT LABEL. THE COMBINED WEIGHT OF THE RV AND ITS' CARGO CAN NOT EXCEED THE STATED GVWR.

GVWR - (Gross Vehicle Weight Rating) - the maximum permissible weight of the fully loaded RV.

GAWR - (Gross Axle Weight Rating) - the allowable weight, including cargo, that can be safely supported by each axle.

UVW - (Unloaded Vehicle Weight) - the weight of the trailer as manufactured at the factory. It includes all weight at the trailer axle(s) and the toungue or pin. If applicable, it also includes full generator fluids including fuel, engine oil and coolants.

CCC - (Cargo Carrying Capacity) - equal to GVWR minus each of the following:

- UVW
- Full fresh (potable water-for drinking and cooking) water weight (including water heater) and full LP gas weight.

Tongue Weight-The weight of the tongue as it bears down on the hitch of the towing vehicle.

Tongue Weight- Tongue weight should be determined with the RV fully loaded as it would be for travel. DO NOT assume that you can fill all tanks and all storage areas and still be within the GVWR.

The weight of fully filled propane containers is considered part of the weight of the RV before it is loaded with cargo and is not considered part of the disposable cargo load. Water, however, is a cargo weight and is treated as such. If there is a fresh water storage tank of 100 gallons, when filled this tank would weigh about 800 pounds. If needed, water can be off-loaded to keep the total amount of cargo added to the vehicle within the limits of the GVWR. Understanding this flexability allows you to make choices that fit your travel and camping needs.

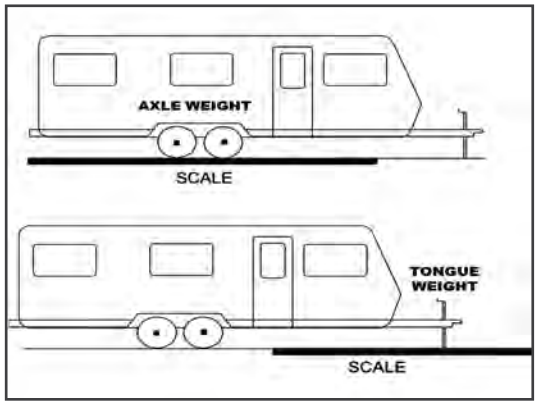
Gross Axle Weight

PLUS

Tongue Weight

EQUALS

Gross Vehicle Weight

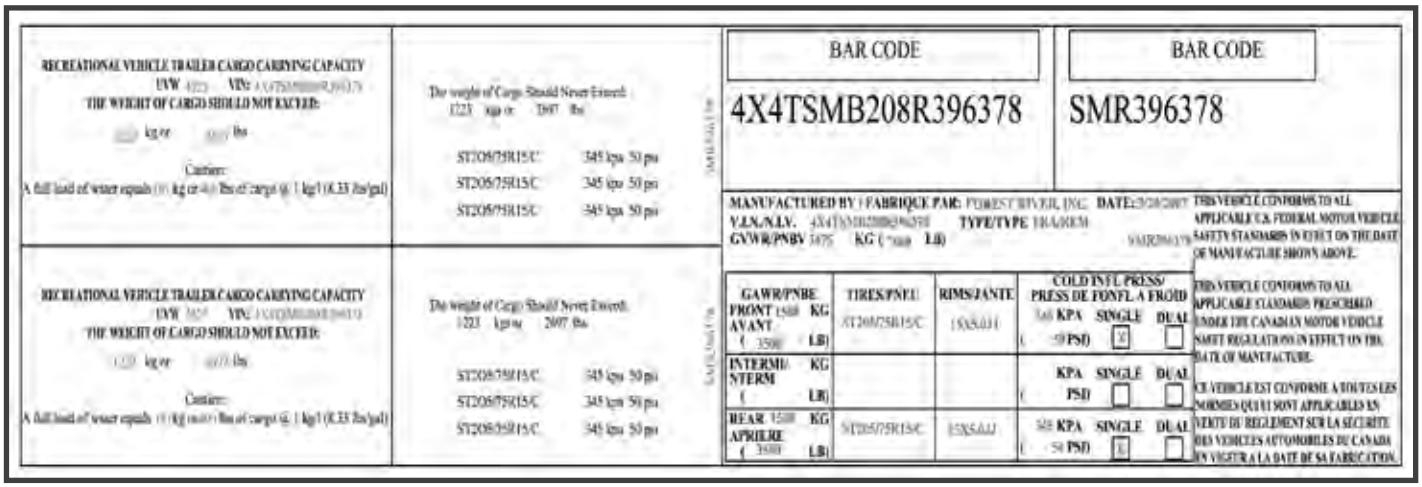


SECTION 3
WEIGHT DISTRIBUTION, LOADING AND TOWING

NOTE: Before filling the fresh water tank, empty the black and gray tanks. Most campgrounds supply dump stations for this purpose. Doing this will provide more cargo capacity.

NOTE: If you find that you have exceeded the GVWR of the recreational vehicle, you will have to remove items until you are within the specified limits. After you have determined how much weight you can safely carry, make a list and keep it for future reference. This will limit the amount of time it takes you to get ready for the road.

VEHICLE LOAD LIMITS


RECREATIONAL VEHICLE TRAILER CARGO CARRYING CAPACITY
THE WEIGHT OF CARGO SHOULD NOT EXCEED:
The weight of Cargo Should Never Exceed:
ST205/75R15/C 345 kpa 50 psi
ST205/75R15/C 345 kpa 50 psi
ST205/75R15/C 345 kpa 50 psi
BAR CODE
4X4TSMB208R396378
BAR CODE
SMR396378
MANUFACTURED BY / FABRIQUE PAR: FOREST RIVER, INC. DATE:
V.I.N./N.I.V.
TYPE/TYPE TRAILER
GVWR/PNBV 3475 KG (LB)
THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.
GAWR/PNBE
TIRES/PNEU
RIMS/JANTE
COLD IN F.U. PRESS/ PRESS DE FONFL. A FROID
FRONT 1588 KG AVANT (3500 LB)
ST205/75R15/C
KPA SINGLE DUAL
PSI)
INTERMD KG NTERM (LB)
KPA SINGLE DUAL
PSI)
REAR 1588 KG ARRIERE (3500 LB)
ST205/75R15/C
KPA SINGLE DUAL
PSI)
THIS VEHICLE CONFORMS TO ALL APPLICABLE STANDARDS PRESCRIBED UNDER THE CANADIAN MOTOR VEHICLE SAFET REGULATIONS IN EFFECT ON THE DATE OF MANUFACTURE.
CE VEHICULE EST CONFORME A TOUTES LES NORMES QUI LUI SONT APPLICABLES EN VERTU DU REGLEMENT SUR LA SECURITE DES VEHICULES AUTOMOBILES DU CANADA EN VIGUEUR A LA DATE DE SA FABRICATION.

LOADING TIPS

- After you have determined what cargo makes up the allowable **GVWR**, make a loading diagram of your properly loaded RV.
- Store emergency items, flashlights, flares, tools, electrical cords and first-aid kit, etc., in an easily accessable storage compartment, taking care to keep those items in a water-proof container.
- When loading your RV, remember to distribute the weight evenly so you get the proper amount of weight on the axle(s) and hitch. Remember to also consider the weight of any items you may purchase on your trip.

NOTES:

LOADING TIPS CONTINUED

- Do not place heavy items in the overhead cabinets. They could shift and fall during travel.
- Luggage and similar cargo stored inside the RV must be secured to prevent possible damage if it should become necessary to make a sudden stop.

- Heavy items should be stored close to the floor in the center of the unit. Avoid loading heavy items near either end of the RV or on the rear bumper. Adjust cargo, as needed, to keep the side to side wheel loads equal.
- Carry only as much water as needed for travel use or to balance the load. Empty your black (waste) and gray (shower and sinks) tanks before beginning each leg of your trip.

WEIGHING TIPS

- Weights of stored items will vary greatly and will affect total weight of your recreational vehicle. Always weigh the recreational vehicle at a certified weigh station equipped with platform scales.

- Check the telephone directory or with local authorities for the location of weigh stations in your area. If you find that you have exceeded the GVWR of the recreational vehicle, you will have to remove items until you are within the specified limits. If you find that either of the GAWR's has been exceeded you will need to redistribute the load within the recreational vehicle to meet the specified limits. Plan ahead before loading your RV to insure that items will be evenly distributed. Not only will the recreational vehicle handle and ride better, you will also have reduced tire wear and increased fuel economy.

- When weighing the recreational vehicle, weigh both right and left hand sides separately. This will insure that you have not overloaded one side or the other, affecting handling. To avoid possible damage, DO NOT store heavy items near the front or rear ends of the RV.

Empty the holding tanks before leaving on a trip, and as often as possible when traveling to help keep weight reduced. Try to carry only as much water as you will need while traving. Sometimes, the water tanks can be used to help balance the weight in the recreational vehicle (a gallon of water weighs 8 pounds).

- Secure all items stored inside and outside the recreational vehicle, and be sure all doors and drawers are secure.

NOTES:

SECTION 3

WEIGHT DISTRIBUTION, LOADING AND TOWING

⚠WARNING **DO NOT ADD ANY TYPE OF RACK OR FRAME TO ANY RECREATIONAL VEHICLE FRAME, BUMPER, OR CHASSIS PART. THE ALTERATION TO LENGTH AND/OR WEIGHT DISTRIBUTION MAY RESULT IN UNSTABLE HANDLING, BE A SAFETY HAZARD, OR COULD DAMAGE THE RV COMPONENTS. ALTERATIONS OF THIS SORT, WITHOUT THE RV MANUFACTURERS' EXPRESS WRITTEN CONSENT, MAY AFFECT THE RV WARRANTY**

HOW TO WEIGH YOUR RECREATIONAL VEHICLE

- With full fuel tanks and a typical passenger load, weigh the tow vehicle separate from the trailer.
- Before weighing the trailer, fill the propane tanks. If you plan to travel with fresh water onboard, the fresh water tank should also be filled to the level you intend to carry when traveling.
- Hitch the trailer and weigh both the trailer and the tow vehicle. Drive onto the scale so that only the tow vehicle (with full fuel and passengers) is on the scales. This weight minus the tow vehicle's weight equals the hitch weight.
- Drive the tow vehicle and the trailer fully onto the scale to get the Gross Combined Vehicle Weight. This weight minus the tow vehicle weight equals the trailer weight. The Gross Vehicle Weight Rating (from the manufacturers' sticker) minus the trailers' weight equals the amount of supplies and personal gear you can carry.

NOTE: IF YOU HAVE DUAL AXLES, YOU CAN GET A WEIGHT FOR EACH AXLE BY STOPPING ON THE SCALE WITH THE FIRST AXLE ON THE SCALE AND NOTING THE WEIGHT. THEN DRIVE SO THAT BOTH AXLES ARE FULLY ON THE SCALE AND NOTE THAT WEIGHT AS WELL. (WEIGH MASTERS ARE ACCUSTOMED TO THIS PROCEDURE AND IF YOU EXPLAIN WHAT YOU INTEND TO DO, WILL USUALLY WORK WITH YOU.)

NOTE: FOR INFORMATION REGARDING HITCHING TO THE TOW VEHICLE, PLEASE REFER TO YOUR SELLING DEALER.

COMPUTING YOUR LOAD AND LOAD DISTRIBUTION:

To avoid overloading you must understand that the GVWR is the most weight your unit was designed to carry. The GVWR is the weight of the entire contents of the unit and the full weight on the axles on the tongue or hitch. DO NOT EXCEED THE GVWR OF THIS UNIT. This information is listed on the "Trailer Weight Information" sticker located on the drivers side (or road side) front corner of the unit. To determine how much cargo weight you can put in your unit, make sure the unit is fairly empty, and all tanks have been drained. Take your unit to a weigh station and have the entire unit weighed on the scale. The total weight from the scale subtracted from the GVWR will give you the amount of cargo weight you can load into your unit. If you are still unsure of overloading, you can take the fully loaded unit to a weigh station and have it weighed the same way. The total weight of the unit should never exceed the GVWR of the unit.

TRAVEL TRAILER HITCH AND SWAY CONTROL:

To safely tow your new travel trailer, we recommend having a weight distributing hitch with a 2 5/16" ball. It is very important to choose a hitch designed for the particular tow vehicle and have it properly installed. Choosing the correct hitch for use with your unit will enhance the stability and maneuverability of your unit and tow vehicle combination. Forest River recommends you consult with your Forest River dealer for assistance in selecting the proper weight distribution and sway control systems for your application.

TRAVEL TRAILER HITCH AND SWAY CONTROL (Cont'd):

A weight distributing hitch is one in which leverage is used to distribute the tongue weight of the trailer between the trailer and the tow vehicle. It consists of the hitch receiver which attaches to the tow vehicle, and spring bars that provide the necessary leverage for load distribution. A hitch of this type, properly installed and matched to your tow vehicle, will provide a level ride that can improve braking and steering control, as well as reduce towing strain.
Pay particular attention to the relationship between the tongue load limits of your tow vehicle and the hitch that you purchase.
Another consideration when choosing a hitch is the addition of a sway control system. Friction and cam-action are the two main types of sway control systems available. Be sure to discuss the addition of sway controls with your dealer and hitch supplier when making the decision to purchase a hitch for your tow vehicle.

Warning!

This unit may become unstable and/or unsafe if towed without proper weight distribution and sway control systems. These should be installed as per the weight distribution and sway control manufacturers' instructions. Again your Forest River dealer should be a valuable resource in selecting the proper weight distribution and sway control systems for your unit.

SAFETY CHAIN INSTALLATION INSTRUCTIONS.
On travel trailers, safety chains should always be connected by crossing them under the trailer tongue. The right chain attaches to the left side and the left chain attaches to the right side.

This will form a cradle that catches the hitch coupler should it come loose. The end connectors should always be connected to the hitch base plate or another location specifically provided for this purpose. NEVER attach safety chains by looping around the ball hitch. If the chains are too long, simply twist them.

BALL HITCH (COUPLER)

NOTE: IT IS VERY IMPORTANT TO LOWER THE LATCH AND INSERT THE SAFETY PIN INTO THE HOLE.
NOTE: AT NO TIME SHOULD THE WEIGHT OF THE FULLY LOADED UNIT EXCEED THE TOW VEHICLES' MAXIMUM WEIGHT RATING.

SECTION 3
WEIGHT DISTRIBUTION, LOADING AND TOWING

LEVELING YOUR TRAVEL TRAILER or FIFTH WHEEL

Manual Leveling

- **DO NOT** use the stabilizer jacks to raise or lower the trailer.
- **DO NOT** use the stabilizer jacks to support the total weight of the trailer.
- **DO NOT** place jacks on the extreme corners of the frame on a fifth wheel with slide rooms. Doing so could cause damage to the slide room.

NOTE: THE JACKS ARE ONLY MEANT TO STABILIZE YOUR TRAILER IN A LEVEL POSITION. ATTEMPTING TO RAISE THE TRAILER BY USE OF THE STABILIZER JACK CAN CAUSE DAMAGE TO THE JACK, FRAME OR BOTH.

NOTE: AFTERMARKET STABILIZER STANDS MUST BE PLACED ONLY UNDER CHASSIS FRAME RAILS.

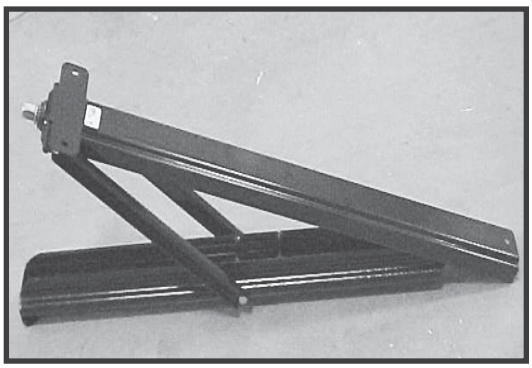
NOTE: ALWAYS FULLY RETRACT THE JACKS BEFORE TOWING THE RV.

⚠WARNING **BEFORE USING THE JACKS, BE SURE TO CHOCK THE WHEELS ON BOTH SIDES. PLACE CHOCKS BOTH IN FRONT OF AND BEHIND THE WHEELS.**

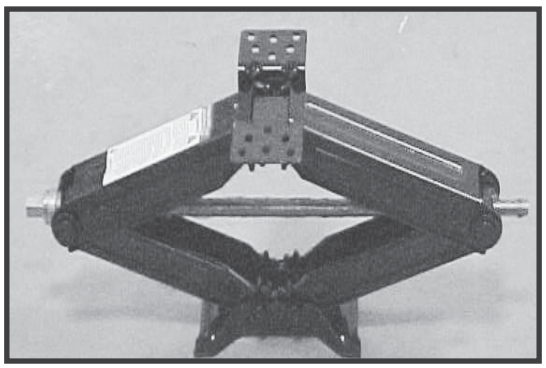
Leveling Your RV

Before leaving on a trip, you must ensure your unit is level.

1. You may choose to purchase three levels, a large and a small which could be installed permanently on your unit and an additional one to use temporarily to insure the trailer is level before attaching the two permanent levels. Install the large level on the front of your unit so it is visable from the drivers' seat of the tow vehicle. Install the small level on the side of the trailer so you can also see it from the driver's seat as you operate the tongue jack or landing gear.
2. Since your unit has two axles, cut or purchase three lengths of 2"x8" wood (with no knots or cracks). Some manufacturers recommend 2"x6" pieces of wood.(Since your tires should never hang over the edge of the leveling boards, the 8" gives you a little more room to manuever.) If you prefer, there are heavy duty plastic blocks you can purchase to use in place of the wood.
3. To determine the length of board needed, measure the distance between the axle hubs and add 18-24". (The board should be long enough to allow the tire to rest completely on the board).



NEW STYLE STABILIZER JACK FOR TRAVEL TRAILERS AND FIFTH WHEELS



SCISSOR JACK

If you have difficulty controlling the rig when backing onto the boards, add extra length. The second board should be 5" longer than the first one and the third board should be 5" longer than the second one.

You may need various sizes of smaller boards for use under jacks and stabilizers. Another possibility is using plastic blocks that can be purchased at most any RV camping store. Smaller trailers also may be able to use leveling ramps instead of the boards but note the weight restrictions on the ramps and compare it to the weight of your trailer.

4. Choose a site that is as level as possible. Be sure the ground is not soft and will support the weight of the trailer.

NOTE: WHEN IT RAINS, WATER MAY COLLECT IN THE BOTTOM OF THE WINDOW FRAME AND DRAIN OUT OF THE WEEP HOLES, MADE FOR THAT PURPOSE. IF YOUR UNIT IS NOT LEVEL, THE WATER MAY NOT DRAIN OUT PROPERLY. THIS COULD CAUSE WATER DAMAGE TO THE WINDOW OR WALL AND COULD BREED MOLD DUE TO CONDENSATION.

5. Before unhitching the trailer from the tow vehicle, level the unit from side to side with the appropriate length of wood, being sure to use chocks or wood blocks in front of the wheels to prevent the trailer from rolling. Once it is level side to side, you may unhitch and remove the chocks, then level it front to back. Sometimes if you move the RV a foot or two, it will be level enough not to need the wood planks.

6. If additional leveling is necessary, using the leveling boards you made before your trip, place one or more in front of or behind the low side tires. Drive onto the boards and recheck the level. If you use more than one board, stagger them so the wheels roll up the boards one at a time.

7. Use the tongue jack (travel trailer) or landing gear (fifth wheel) to adjust your front to back level, lower the stabilizers to the ground to help prevent rocking. After stabilizing the unit, be sure the frame is not twisted, buckled or stressed. Be sure that all doors and windows operate freely.

NOTE: BEFORE MOVING YOUR RV, BE SURE ALL STABILIZERS (AND STEPS)ARE REMOVED OR FULLY RETRACTED.

⚠WARNING **DO NOT RAISE THE JACKS ON THE FIFTH WHEEL UNTIL YOU ARE SURE THE FIFTH WHEEL IS POSITIONED ACCURATELY ON THE TOW VEHICLE.**

'WARNING' **INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.**

NOTES:

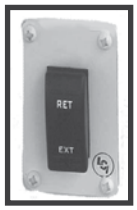
Manual Operation of Fifth Wheel Jacks

The fifth wheel manual jack uses a hand crank on the side of the unit to raise or lower the fifth wheel from the front. The jacks are used to raise or lower the fifth wheel onto or off of the tow vehicle hitch and for leveling the unit front to back.

1. To lift the fifth wheel for hitching or unhitching, drop the pad tube by removing the lock pin. Insert the pin in the hole that places the pad closest to the ground. This will compensate for variations in terrain. If parked on a level surface, keep both sides pinned in the same position.
2. Open the cover on the side of the unit and insert the hand crank into the alignment tube until the end engages the crank shaft.
3. Turn the crank handle counterclockwise to raise the fifth wheel and clockwise to lower.
4. When retracting the jacks, raise them as far as possible with the crank handle. Remove the lock pin and raise the pad tube, re-pinning in the highest possible position.
5. Remove and store the jack crank handle. Close and secure the access door.

⚠WARNING **KEEP HANDS AND ALL OTHER BODY PARTS CLEAR OF FLUID LEAKS. OIL IN THE HYDRAULIC LANDING GEAR MAY BE UNDER HIGH PRESSURE AND CAN CAUSE SERIOUS SKIN PENETRATING INJURIES.**

Electric Fifth Wheel Jack



The power fifth wheel jacks provide an electrically driven motor to take the place of the manually operated jack crank handle for raising and lowering the fifth wheel. To operate, hold the switch in the position you wish to move the jacks, either UP or DOWN. When released, the switch will automatically return to its centered OFF position.

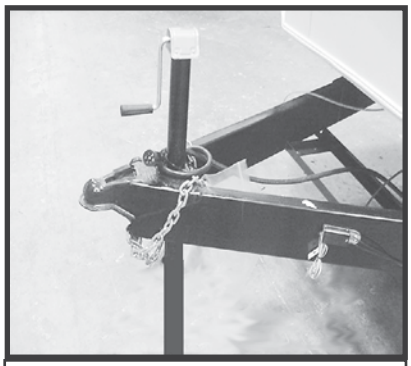
NOTE: THE JACKS MAY ALSO BE OPERATED BY USING THE MANUAL HAND CRANK IF THE MOTOR IS INOPERABLE.

Hydraulic Landing Gear (Fifth Wheel)

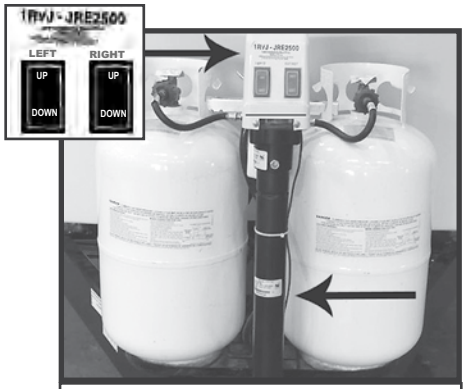
The Lippert Hydraulic Landing Gear is controlled electronically from the switch near the pump.The leveling system shall only be operated under the following conditions:

1. The unit is parked on a reasonably level surface.
2. The towing vehicle is disengaged from the unit.
3. All persons, pets and property are clear of the coach while the leveling system is in operation.

5TH WHEEL LANDING GEAR MANUAL OPERATION INSERT CRANK HANDLE INTO ACTUATOR OPENING LOCATED INSIDE THE LP COMPARTMENT



TRAVEL TRAILER MANUAL TONGUE JACK



TRAVEL TRAILER ELECTRIC TONGUE JACK

SECTION 3
WEIGHT DISTRIBUTION, LOADING AND TOWING

SLIDE ROOM

Before extending the room, check the exterior of the unit to be sure the room will not hit anything outside when it is fully extended. Locate the rocker switch that reads 'SLIDE ROOM'. Hold the switch in the 'OUT' position. (Note: You may hear a low grinding noise at the initial start of the operation. This is normal. It's the sound of the piston shafts traveling through the free travel area of the brackets.) Continue to hold the switch down until the room stops moving. If the room stops moving before it is fully extended, the piston shafts may need to be adjusted. (Note: If this happens, contact your dealer and set up a service appointment for adjustment.) To bring the room in, reverse the procedure.If power fails or the room does not function electrically, you can manually operate the room.

NOTE: FOR OPTIMIM PERFORMANCE, THE SLIDE OUT SYSTEM REQUIRES FULL BATTERY CURRENT AND VOLTAGE. THE BATTERY MUST BE MAINTAINED AT FULL CAPACITY. IF THE BATTERY IS FULLY CHARGED AND YOU STILL DO NOT HAVE POWER, CHECK THE TERMINALS AND OTHER CONNECTIONS AT THE BATTERY.

⚠WARNING **DO NOT PERFORM ANY MAINTENANCE WORK ON YOUR SLIDE OUT SYSTEM WITHOUT FIRST DISCONNECTING THE BATTERY. FAILURE TO DO SO COULD RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**

CAUTION **WHEN OPERATING THE SLIDE ROOM. BE SURE THERE ARE NO OBSTRUCTIONS IN THE TRAVEL PATH.**

MANUAL SLIDEOUT OPERATION

Auxiliary Operation

The hydraulic landing gear can be run with auxiliary power devices like electric drills, ratchet wrenches or cordless screwdrivers. In the event of electrical or system failure, this manual method of extending and retracting the jacks can be used. A standard handheld drill is all that is required. Insert hex bit into coupler found under protective label. Run the drill forward or clockwise to extend slideout room and in reverse or counterclockwise to retract slideout room.

Power Failure

In the event of a power failure or low battery, the slideout room may be operated manually with a crank handle. (If you do not have one, you may order one from your Forest River dealer.) The manual crank shaft is located on the motor transmission housing. Turn the crank counter clockwise to move the room IN, and clockwise to move the room OUT.

NOTE: ONCE YOU HAVE YOUR ROOM IN, GO TO THE NEAREST DEALER.

DO NOT MAKE MODIFICATIONS TO YOUR RECREATIONAL VEHICLE BY ADDING AFTER-MARKET ITEMS, (gooseneck adapters, hitches, bike racks, ladders, storage racks etc.), WITHOUT FIRST OBTAINING WRITTEN AUTHORIZATION FROM FOREST RIVER, INC. DOING SO MAY CAUSE DAMAGE TO YOUR RV AND LIMIT, REDUCE, OR VOID YOUR WARRANTY.

END OF SECTION

SECTION 4
LIVING QUARTERS, LP and ELECTRICAL

PROLONGED OCCUPANCY
Your recreational vehicle was designed for recreational use and short-term occupancy. If you expect to occupy your RV for an extended period of time, be prepared to deal with condensation and the humid conditions that may be encountered.

CONDENSATION
Condensation is the change of water from its gaseous form (water vapor) into liquid water. Just as moisture collects on the outside of a glass of cold water during humid weather, moisture can condense on the inside surfaces of your camper. This condition is increased due to the small volume of space and the airtight construction of your camper.

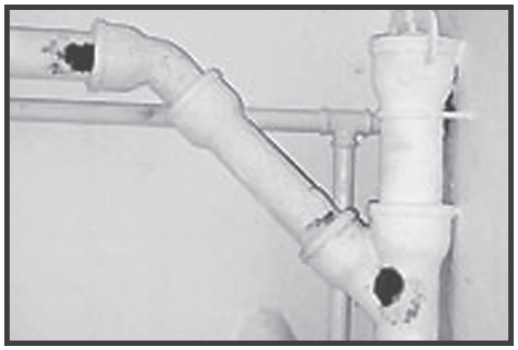
Mold occurs when condensation is left for prolonged periods of time and is extremely difficult to kill. Controlling condensation inside your unit is the best way to avoid not only mold but dampness as well, both of which can cause damage to your RV and/or its' contents.

Condensation can infiltrate the insulation, motors, working parts of appliances or plumbing pipes, to name a few. Even though you may not see condensation, it may be inside the walls, cupboards or under the floor so it is best to take every precaution to avoid it occurring. Generally, an area that is dark, and where moisture can accumulate, is a potential breeding ground for mold.

DAMAGE CAUSED BY MOLD OR MILDEW IS A MAINTENANCE ISSUE AND IS NOT WARRANTABLE.

CONDENSATION ON A WINDOW IS AN INDICATION OF TOO MUCH HUMIDITY.

RUST ON PIPES OR OTHER PARTS OF HEATING, PLUMBING OR AIR CONDITIONING EQUIPMENT IS ALSO A SIGN OF TOO MUCH HUMIDITY.



It is especially important when storing your RV or if you do not anticipate using it for an extended period of time, to air it out. Empty the refrigerator and freezer and dry it completely. Dry the inside of the shower and shower head.

Check for any leaks at the kitchen sink, toilet and bathroom sink. It's also a good idea to check your unit periodically to insure there is no condensation forming on the windows, which would indicate there is too much moisture in your unit.

If you see signs of too much moisture, take the necessary steps to remove the moisture to prevent possible damage to the contents or the RV itself.

BELOW ARE TIPS TO HELP CONTAIN HUMIDITY IN YOUR TRAILER:

1. Keep indoor humidity low--if possible below 60%. (Ideally between 30 and 50%) relative humidity. Relative humidity can be measured with a moisture or humidity meter. The meter is a small, inexpensive ($10-$50) instrument available at most hardware stores. Some larger campground stores may also have the meters.
2. Consider using a small dehumidifier to help rid the unit of moisture.

3. Avoid allowing wet clothing to hang to dry inside the unit.
4. When showering or bathing, open the roof vents or turn on a fan to allow steam and moisture to escape. Wipe down the shower walls to prevent water evaporation.
5. Be sure there are no obstructions in any vents and that all vents are properly sealed. Pay particular attention to appliances that produce moisture, such as air conditioners, shower, oven vents, and clothes dryer vents.

6. Try using the microwave oven instead of the stovetop to boil water or soups for long periods. If you choose to use the stove to boil water or soup, open a window or a vents lightly(even in the winter) to provide a passage for the air to flow. This will also help restrict the humidity.

7. Try to recirculate the air by using vent fans or small oscillating fans or your furnace fan. If condensation occurs, keep the windows clean in order to prevent the growth of moldand mildew.
8. Do not use a ceramic heater as it provides no air movement, which will not aid in ridding the RV of condensation.

REMEMBER THAT MOLD IS A MAINTENANCE ISSUE AND AS THE OWNER, PROPER MAINTENANCE OF YOUR RV IS YOUR RESPONSIBILITY. CONTROLLING HUMIDITY INSIDE YOUR RV WILL HELP TO PREVENT DAMAGE WHICH MAY OCCUR DUE TO NEGLECT.

NOTE: WHEN IT RAINS, WATER MAY COLLECT IN THE BOTTOM OF THE WINDOW FRAME AND DRAIN OUT THE WEEP HOLES, MADE FOR THAT PURPOSE. IF YOUR UNIT IS NOT LEVEL, THE WATER MAY NOT DRAIN OUT PROPERLY. THIS COULD CAUSE WATER DAMAGE TO THE WINDOW OR WALL AND COULD BREED MOLD DUE TO CONDENSATION.

NOTE: IF YOU HAVE WATER AND/OR MOLD DAMAGE CAUSED BY SEWAGE OR OTHER CONTAMINATED WATER, IT IS BEST TO CALL IN A PROFESSIONAL, WHO HAS EXPERIENCE CLEANING LIVING SPACES DAMAGED BY CONTAMINATED WATER.

CAUTION **IF YOU HAVE HEALTH CONCERNS, CONSIDER CONSULTING A HEALTH PROFESSIONAL BEFORE ATTEMPTING MOLD CLEANUP.**

CAUTION' **INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT INVEHICLE DAMAGE OR PERSONAL I**

NOTES:

SECTION 4
LIVING QUARTERS, LP and ELECTRICAL

SAFETY DEVICES

⚠WARNING **NEVER IGNORE ALARMS ON SAFETY DEVICES. IF THE ALARM SOUNDS AND YOU ARE NOT ABSOLUTELY CERTAIN OF THE SOURCE, GET EVERYONE OUT OF THE HOUSE IMMEDIATELY.**

- Always have a plan of escape. Update and practice your escape plan every six months.
- Have a meeting and discuss the plan, showing everyone what to do, including guests.
- Do not waste time by picking up valuables or getting dressed. Sometimes seconds count!
- Weekly vacuum any dust off the alarm using the soft brush attachment.
- DO NOT spray cleaning agents or waxes directly onto the detector as it may cause damage to the sensor.

SMOKE DETECTOR

- Smoke alarms may not have time to alarm before the fire causes damage, injury or even death.
- A smoke detector works for only detecting smoke, not fire.
- The alarm will sound only if smoke reaches the sensor.
- Check battery/s at least once a week while the RV is in use.
- This unit will not alert hearing-impaired residents.(Special alarms with flashing strobe lights are needed for the hearing impaired.)
- Smoke alarms have a limited life and are not foolproof. Never attempt to repair this unit, replace if faulty.
- Never disconnect the battery to silence the alarm.

CO DETECTOR

- The carbon monoxide detector is designed to detect carbon monoxide from any source of combustion. It is NOT designed to detect smoke, fire or any other gases.
- This detector doesn't work without batteries--DO NOT remove batteries except for replacement.
- Test alarm each week while RV is in use and before beginning a trip. Press the 'TEST' button. If the alarm fails to sound, replace the unit immediately. DO NOT attempt to repair.

LP DETECTOR

- This detector senses propane gas in the air, not smoke or fire or other gases. It detects the presence of propane gas at the sensor, explosive gas may be present in other areas.
- Test your LP detector weekly. If the alarm is located behind a closed door, it may not be heard.
- DO NOT attempt to repair the detector. If it fails the test, change batteries, if it still does not function properly, replace the entire unit.

'WARNING' **INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.**

NOTES:

SECTION 4
LIVING QUARTERS, LP and ELECTRICAL

LP GAS (Liquid Propane)

⚠WARNING **DO NOT** bring or store LP gas cylinders, gasoline or other flammable liquids inside the vehicle. A fire or explosion could result.

⚠WARNING **DO NOT** fill container(s) to more than 80% capacity. Overfilling the LP tanks can result in uncontrolled gas flow which can result in an explosion or fire.

⚠WARNING **NEVER** use any other type of LP gas container than the one furnished with your RV. If the tank must be replaced, check with your dealer for specifications.

⚠WARNING LP gas regulators must always be installed with the regular vent facing downward. Regulators that are not in compartments have been equipped with a protective cover. Be sure the regulator cover is kept in place to minimize vent blockage that could result in excessive gas pressure causing fire or explosion.

⚠WARNING **DO NOT** rely upon being able to smell LP gas leaks as the odor may not be sufficiently strong enough to detect.

⚠WARNING **DO NOT** use butane or butane mixtures in your LP tank. When you fill your tanks be sure to use propane only.

⚠WARNING **DO NOT** make repairs to the LP tank. The LP gas system is designed to meet rigid standards. Except for simple maintenance and occasional tightening of a connection, always take your vehicle to an authorized dealer for LP gas problems.

⚠WARNING Aways have an authorized LP gas supplier fill your LP tanks. When the LP gas container is being filled, **DO NOT** smoke, strike a match or ignite a lighter. A spark or flame could ignite fumes. Also be sure all burner and pilot flames are out and the service valve is closed.

⚠WARNING If you detect a sulfur or 'rotten egg' odor, **DO NOT** turn on any appliances. Shut off all operating appliances. Extinguish any open flames, including cigarettes. **DO NOT** touch any electrical switches. Open windows and doors and exit the vehicle. Shut off the gas supply at the LP tank (or source). Immediately call a Service Center or LP gas supplier from an outside telephone and follow their instructions.

⚠WARNING **DO NOT** turn on the gas supply until the gas leaks have been repaired.

⚠WARNING **DO NOT** attempt to adjust or repair the regulator. Adjustments and repairs require specialized training and tools. Contact a qualified LP Service Technician. Failure to follow these instructions could result in fire or explosion.

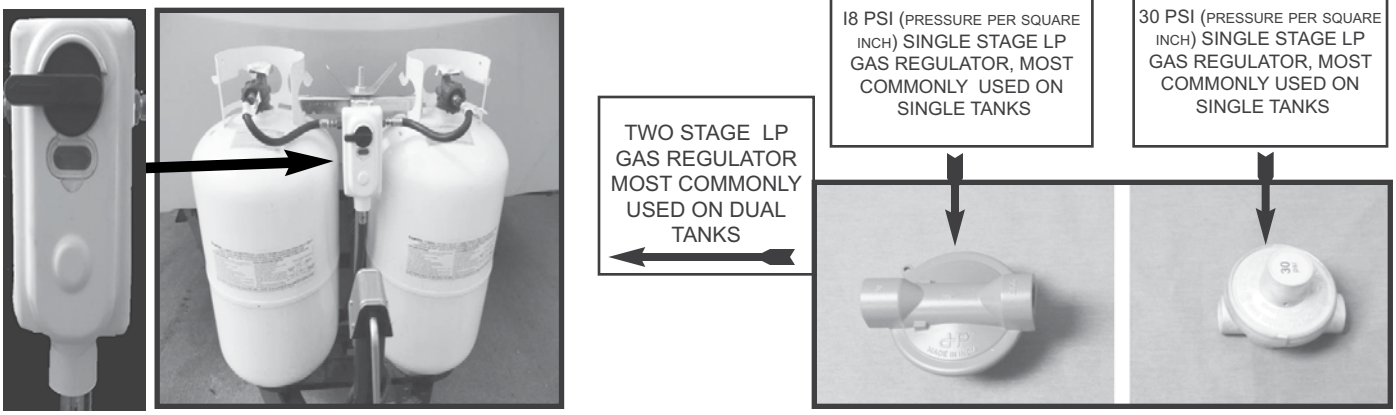
DO NOT MODIFY YOUR LP SYSTEM. DO NOT REMOVE COMPONENTS OR REPLACE WITH COMPONENTS THAT ARE NOT OF EQUAL VALUE.

'WARNING' INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.

SECTION 4
LIVING QUARTERS, LP GAS and ELECTRICAL

The liquid petroleum (LP) gas system in your recreational vehicle furnishes the fuel for cooking, heating and hot water. LP gas can also be used as an alternate energy source for refrigeration. It is a clean, efficient and safe form of energy when proper handling and safety precautions are observed.

The gas is stored with extreme pressure in the tank, with space in the tank to allow for expansion into vapor. This vapor is reduced in pressure by passing through a regulator. This reduction in pressure is a two step process which assures consistent pressure for use, regardless of outside temperatures, weather or altitude.


TWO STAGE LP GAS REGULATOR MOST COMMONLY USED ON DUAL TANKS
I8 PSI (PRESSURE PER SQUARE INCH) SINGLE STAGE LP GAS REGULATOR, MOST COMMONLY USED ON SINGLE TANKS
30 PSI (PRESSURE PER SQUARE INCH) SINGLE STAGE LP GAS REGULATOR, MOST COMMONLY USED ON SINGLE TANKS

REGULATOR

LP gas is under high pressure in the tank. The purpose of the regulator is to reduce the pressure inside the tank to allow for safe use. A two-stage automatic regulator, most commonly used on dual tanks, offers the convenience of instant, automatic changeover from the empty to the full tank.

DO NOT adjust or repair the regulator. It is preset at the factory to certain specifications and should only be adjusted by a qualified propane service technician. To avoid potential problems, have your LP gas system checked at least once a year by an authorized service center and after each extended trip.

⚠WARNING **NEVER** test for a leak by lighting a match or having an open flame where you suspect a leak.

'WARNING' INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.

NOTES:

SECTION 4
LIVING QUARTERS, LP GAS and ELECTRICAL

REGULATOR FREEZE-UP

The term 'regulator freeze-up' is a misleading one. Regulators and LP gas do not freeze. However, the moisture that can be contained in the gas will freeze as the gas expands and cools passing through the regulator. This freezing of the moisture in the gas can build up and partially or totally block the passage of the gas through the regulator. Freezing can also occur when outside temperatures are low enough to contribute to the freezing of the moisture in the gas.

The source of the moisture is varied. It can occur at the refinery or gas bulk plant. in the cars used to transport the gas, or even within your own LP tanks. Moisture in an LP tank can occur when a tank service valve is left open, allowing moist air to enter and become trapped.

A two-stage regulator helps reduce the possibility of freeze-up because of its larger orifice size and that heat is being transferred through the walls of two regulators instead on only one.

Tips to help prevent regulator freeze-up:

- Make sure your LP tank is free of moisture before refilling
- DO NOT overfill the LP tank
- Be sure to keep the service valve on an empty tank closed
- If freezing occurs, have your LP dealer purge the LP tank before refilling
- Check with your dealer to determined what deicing agent is approved to add to the LP tank
- Keep the regulator covered at all times

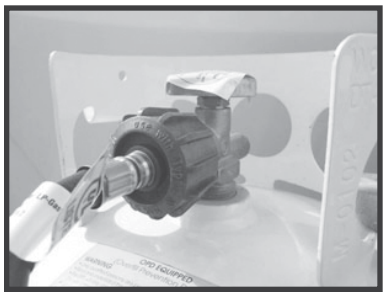
NOTE: IF FREEZE-UP DOES OCCUR, SHUT THE LP OFF AT THE TANK. A FROZEN REGULATOR MAY PERMIT LP GAS TO FLOW AT HIGH PRESSURE, RESULTING IN LEAKS AT APPLIANCES OR IN THE LINES. NEVER ATTEMPT TO THAW WITH AN OPEN FLAME. A SMALL LIGHT BULB CAN SOMETIMES BE USEFUL TO PROVIDE HEAT AND AID THE THAWING PROCESS. ONCE THAWED, BE SURE TO TAKE THE PROPER STEPS TO PREVENT A REOCCURENCE. HAVE THE SYSTEM CHECKED BY YOUR LP SUPPLIER.

Other Cold Weather Factors

As outside temperatures drop, the BTU value of the LP gas is lessened. The colder liquid LP in the tank/s requires heat from the surrounding air to vaporize. This lowering of BTU value can significantly affect the performance of the system. Keeping your LP tanks as full as possible in cold weather and reviewing the BTU/hr rating plates on LP appliances will help insure proper LP management.

NOTES:

LP PIGTAIL

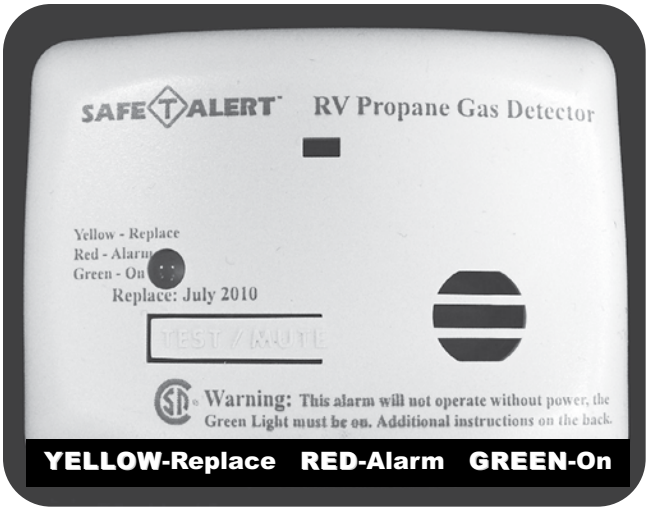


The LP pigtail is a hose used to connect to the regulator on the tank through which the LP fuel flows. This safety feature is generally recognized by the large green nut that attaches to the outside of the valve on the regulator. It limits excessive gas flow and prevents gas from flowing unless the connection is tight.

NOTE:

THE CONNECTION AT THE LP TANK WILL SHUT DOWN IN EXTREME HEAT (240^0-300^0 FAHRENHEIT.)

LP DETECTOR


SAFE T ALERT
RV Propane Gas Detector
Yellow - Replace
Red - Alarm
Green - On
Replace: July 2010
TEST / MUTE
Warning: This alarm will not operate without power, the Green Light must be on. Additional instructions on the back.
YELLOW-Replace RED-Alarm GREEN-On

In the Event of an Alarm:

If the detector senses the presence of LP gas, the red light will turn from green to red, accompanied by an audible alarm. If the alarm sounds:

1. Immediate evacuate all occupants from the recreational vehicle.
2. Extinguish any open flames, pilot lights and all smoking material.
3. DO NOT touch any electrical switches.
4. Shut off the gas supply at the tank.
5. Open doors and windows to ventilate.
6. DO NOT USE THE RANGE HOOD OR OTHER POWER VENTS.
7. The alarm will continue to sound as long as LP gas is detected or until turned off.

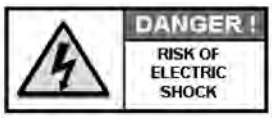
NOTE: THE ALARM MAY SOUND AT TIMES WHEN NO LP GAS IS PRESENT DUE TO HOUSEHOLD PRODUCT USE SUCH AS AEROSOL HAIRSPRAY, CERTAIN CLEANERS, ADHESIVES, ALCOHOL, ETC.

TIP: TO HELP AVOID A FALSE ALARM, BE SURE TO WELL VENTILATE THE AREAS WHERE THESE PRODUCTS ARE IN USE.

NOTES:

SECTION 4
LIVING QUARTERS, LP GAS and ELECTRICAL

ELECTRICAL SYSTEM



Connecting the power cord to a non-grounded or improperly grounded power source can result in a dangerous and possibly fatal electric shock.

The electrical power supply provided for the recreational vehicle is a dual system, operating with 110 volt AC and/or 12 volt DC.

The 110 volt power may be provided by either connecting the recreational vehicle to an outside power source when parked, or by use of a recreational vehicle generator. When the 110 volt system is operational, power also passes through a system converter, allowing the full use of all 12 volt functions in the RV. Some 110 volt functions in the RV may include:

Refrigerator	Ice-maker	Roof-mounted air conditioner/s
TV	Microwave	Converter
Electrical outlets	Some lights	DVD, VCR, Radio

The refrigerator also has the option of running on LP gas when 110 volt power is not available. When not connected to 110 volt power, the 12 volt system functions can be supplied by the batteries. Batteries are recharged by the power converter when the RV is attached to an outside 110 volt power source, or by the generator. (Be sure you turn the power switch ON; the generator will not charge the batteries or otherwise operate when the power switch is in the OFF position.)

CONNECTING TO AN OUTSIDE POWER SOURCE

A 30 amp or 50 amp power cord is provided to connect the RV to a grounded power source. The electric utility service connection is located on the driver's side, near the rear. The power cord is stored inside the electric utility service compartment. (Depending upon the type of RV you have, the power cord will either be permenantly mounted or detachable.)

NEVER USE A TWO WIRE EXTENSION CORD, A CHEATER ADAPTER WITH THE GROUND PIN REMOVED, OR PUT A LOWER AMPERAGE PLUG ON YOUR POWER CORD IN PLACE OF THE MOLDED PLUG.

DANGER! INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.
'WARNING' INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.

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SECTION 4
LIVING QUARTERS and ELECTRICAL

GENERAL ELECTRICAL INFORMATION

The electrical power supply provided for the recreational vehicle is a dual system, operating with 110 volt AC and/or 12 volt DC. The 110 volt power may be provided by either connecting the recreational vehicle to an outside power source when parked, or by use of a recreational vehicle generator. When the 110 volt system is operational, power also passes through a system converter, allowing the full use of all 12 volt functions in the recreational vehicle.

110 volt functions in the recreational vehicle include the refrigerator, ice maker, roof mounted air conditioner(s), TV and VCP, microwave over, converter, outlets for 110 volt operated conveniences, and some lights. the refrigerator also has the option of running on LP gas when 110 volt power is not available. All other electrical functions in the RV are supplied with 12 volt power.

When it is not possible to access 110 volt power, the 12 volt system functions can be supplied by the auxiliary batteries. The auxiliary batteries are recharged by the power converter when the recreational vehicle is attached to an outside 110 volt power source, or by the generator when it is running.

CONNECTING TO AN OUTSIDE POWER SOURCE

A 30 or 50 amp shoreline power cord is provided to attach the recreational vehicle to a grounded power source. In most cases the electric utility service connection is located on the driver's side of the RV near the rear, depending on the model you have. The power cord is stored inside the electric utility service compartment. The electric utility service door has a slot with a cover that can be moved to the side, allowing the power cord to be used and the door to be closed and locked for security. NEVER use a two wire extension cord, a cheater adapter with the ground pin removed, or put a lower amperage plug on your power cord in place of the molded plug.

⚠WARNING **CONNECTING POWER CORD TO AN NON-GROUNDED OR IMPROPERLY GROUNDED SOURCE CAN RESULT IN A POSSIBLY FATAL ELECTRIC SHOCK.**

BATTERIES

The batteries will be located in a separate compartment or in a battery box located on the 'A' frame. It is important to be sure the batteries are kept charged. Take time to turn off all lights or other 12 volt conveniences when not in use. Connect the recreational vehicle to a 110 volt power source when possible, to prevent draining the batteries.

DANGER! ***I***NDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.
'WARNING' INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.

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The charge condition of the batteries is displayed on the monitor panel, generally located in the Control Center, mounted on the wall. To check, press and hold monitor test switch while reading the charge level on the battery gauge. Charge levels indicated are divided into sections from weak to fully charged.

BATTERY MAINTENANCE

While Forest River didn't install your battery, we want to provide you with the following information. Battery maintenance is important. Checking the condition of a battery at regular intervals will help insure its proper operation. Here are some recommendations for checking and servicing the batteries.

1. Keep the battery mounted securely. Excessive vibration can cause early battery failure.
2. Check the electrolyte level of the auxiliary batteries at regular intervals. Keep each cell filled with distilled water, to just above the plates. Once the plates have dried out, they cannot be reactivated, and the capacity of the battery is reduced in direct proportion to the area of plate surface that has become dry. This kind of damage can occur quickly.
3. Keep the battery clean. Corroded terminals make poor contact. Battery sulfation occurs when the battery has been standing in a discharged condition over a long period of time, or when the battery has been operated continually in a state of partial discharge.
4. Check the outside condition of the battery. Look for cracks in the case or vent plugs, If the case is cracked, the battery must be replaced, If the vent plugs are cracked, they must be replaced.
5. Watch for over charging. Three ways to spot overcharging are
   a. Active material on the vent cap (heavy deposit of black lead-like material on the underside of the vent cap.)
   b. Excessive use of water.
   c. By testing voltage regulator output.
6. Make sure the battery hold downs and carrier are kept clean and free of corrosion.

Note: When removing a battery, disconnect the ground battery clamp first. When installing a battery, always connect the grounded battery clamp last. When a battery needs to be replaced, make sure to replace it with a battery of the same characteristics as the original equipment. Consult your dealer for advice on battery replacement.

⚠WARNING **DUE TO THE POTENTIAL DANGER IN FAILING TO HEED THIS WARNING, THE RECREATIONAL VEHICLE MANUFACTURER CAN NOT BE HELD RESPONSIBLE SHOULD DAMAGE, INJURY OR DEATH RESULT FROM FAILURE TO CONNECT THE POWER CORD TO A PROPERLY GROUNDED POWER SOURCE.**

'WARNING' INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.

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SECTION 4
LIVING QUARTERS and ELECTRICAL

BATTERY SAFETY

⚠WARNING ALWAYS SHIELD YOUR EYES WHEN WORKING NEAR BATTERIES. BATTERIES CAN EXPLODE. DO NOTSMOKE OR EXPOSE BATTERY TO ELECTRIC SPARK OR FLAME. WHEN CHARGING OR DISCHARGING, BATTERIES GENERATE HYDROGEN. HYDROGEN AND AIR IS A VERY EXPLOSIVE MIXTURE.

⚠WARNING DO NOT SHORT ACROSS THE BATTERY TERMINALS. THE SPARK COULD IGNITE THE GASES. DO NOT WEAR METAL JEWELRY OR A WATCH WHEN WORKING ON A BATTERY.

⚠WARNING DISCONNECT THE BATTERY CABLE AND THE 110 VOLT POWER CORD BEFORE WORKING ON ELECTRICAL SYSTEM. **DO NOT** RECONNECT THE CABLES UNTIL ALL WORK HAS BEEN COMPLETED.

⚠WARNING BATTERY ELECTROLYTE IS A CORROSIVE, POISONOUS, SULFURIC ACID. AVOID CONTACT WITH SKIN, EYES, CLOTHING OR ANY PAINTED SURFACE.

BATTERY CHARGING

The converter also operates as a battery charger when it is connected to a 110 volt power source. If the battery is below its full charge, the converter charger will begin operation at a rate that reflects the level of discharge. When the battery is again fully charged, the converter charger drops its charging level back to a maintenance lever to keep the battery fully charged. When charging a battery, follow these safety precautions:

1. Disconnect the battery from the recreational vehicle.
2. Check electrolyte statis before charging. Be sure each cell is properly filled with distilled water.
3. Use care when connecting and disconnecting the cables from chargers. A poor connection can cause an electrical arc which can result in an explosion.
4. Remove the battery vent caps before charging and be sure that the electrolyte solution does not splash out, as a result of charging too quickly.
5. Read the literature supplied by the battery manufacturer and follow all their warnings or precautions as stated in their manual.

'WARNING' INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.

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SECTION 4
LIVING QUARTERS and ELECTRICAL

POWER CONVERTER

The converter is used to switch 110 volt electricity from an external supply or from the generator to 12 volt electricity. Under normal conditions, the converter requires no maintenance. If the converter does not have a 110 volt supply to convert to 12 volt, it automatically switches the batteries into the electrical circuit to power 12 volt functions. When reconnected to a 110 volt power source, it will again operate from that source.

The converter will run warm, which is normal. If, however, it gets too hot, it will turn itself off. After it cools, it will come back on. In most cases, shut down occurs due to poor ventilation.

A slight hum during operation is also normal for the converter, If you have no 12 volt power and no hum, check to see if 110 volt power to the converter has been interrupted.

GROUND FAULT CIRCUIT INTERRUPTER

The 110 volt outlet in the bath is equipped with a protective circuit interrupter. The ground fault circuit interrupter (GFCI), is designed to break the flow of current to the protected outlet when an imbalance of current is detected. Imbalances include electrical leakage in an appliance such as a shaver or hair dryer that have developed a weak spot in electrical insulation. The possibility of electrocution exists when using a faulty appliance. while at the same time being in contact with an electrical ground such as water, plumbing or the earth.

If an imbalance is detected, the GFCI will trip and shut off power to the outlet. Even with GFCI protection, the electrical shock will still be felt, but to a lesser degree. It also does not protect against short circuits or system overloads. Circuit breakers in the main panel which supply power to the circuit, will trip if either of these conditions exists. The GFCI receptacle should be tested initially when the recreational vehicle is purchased, and at least monthly thereafter.

⚠WARNING **EVEN WITH GFCI PROTECTION, PERSONS WITH SEVERE HEART OR OTHER HEALTH PROBLEMS MAY STILL BE SERIOUSLY AFFECTED BY AN ELECTRICAL SHOCK. THE GFCI OUTLET IS NOT A SUBSTITUTE FOR GOOD ELECTRICAL SAFETY. IT DOES NOT PROTECT AGAINST CONTACT OF THE HOT AND NEUTRAL WIRE AT THE SAME TIME. NOTE: THE GFCI DOES NOT PROTECT ANY CIRCUIT OTHER THAN THE ONE TO WHICH IT IS CONNECTED.**

'WARNING' **INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.**

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TO TEST THE CIRCUIT, USE THE FOLLOWING PROCEDURE:

1. Make sure power to the circuit is ON.
2. Push the reset button.
3. The red reset button should pop out.
4. All power should be interrupted to outlets protected by the GFCI.
5. Verify by plugging in a light at these outlets, and pushing in the red reset button. If the button does not pop out after pushing the test button, or GFCI circuit continues to trip, immediately turn off power at the circuit breaker panel and have a qualified electrician service it.

NOTE: THE GFCI DOES NOT PROTECT ANY CIRCUIT OTHER THAN THE ONE TO WHICH IT IS CONNECTED.

CIRCUIT BREAKERS

The 110 volt system is protected by circuit breakers. These breakers automatically trip if the circuit load is too heavy, or a short circuit occurs. If a circuit breaker has been tripped, do not reset the breaker until the cause of the problem is identified and corrected.

The generator also has two AC circuit breakers, and a DC fuse on the generator control panel. If an interruption in generator operation occurs, check to see if any of these have been tripped, Consult the manuals provided with the generator before attempting maintenance on the generator.

12 VOLT FUSES

A 12 volt DC distribution panel is located next to the 110 volt circuit breakers. The panel contains circuits with replaceable fuses for protection of recreational vehicle 12 volt lines. If any line is loaded beyond the capacity of its fuse, the fuse will blow. A portion of the 12 volt load on the line must be turned off to reduce the total load on the line to a level below the capacity of the fuse, Replace the fuse with the same size fuse. DO NOT replace with a larger fuse than indicated.

If this reduction of load on the line does not stop the blowing of the fuses, there may be a short some where along the 12 volt line, or at a not-fused 12 volt component on the line. Check the 12 volt line and any components along the line. Locate the short and take necessary steps to repair it. If you cannot locate the problem, call a qualified electrician.

NOTE: KEEP ADDITIONAL FUSES ON HAND IN THE RECREATIONAL VEHICLE. REPLACEMENT FUSES ARE AVAILABLE AT GAS STATIONS, HARDWARE STORES, OR AUTOMOTIVE SUPPLY STORES. REMEMBER THAT THE REPLACEMENT FUSE MUST BE THE SAME AMPERAGE RATING AS THE ORIGINAL FUSE.

END OF SECTION

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PLUMBING

PLUMBING
A recreational vehicle plumbing system has the dual ability to be self contained with onboard storage, or use facilities provided by an external pressurized source. The fresh water system consists of those items which are used to deliver water for your use, while the waste water system is made up of the drains and tanks which store and remove water that has been used. Components of the plumbing system consist of strong, lightweight, corrosion resistant materials that provide long life, and easy cleaning. By following the instructions outlined here, you can expect efficient operation with a minimum of maintenance.

FRESH WATER
Potable (fresh water) is supplied by either the fresh water tank aboard the unit or from an outside source, connected through the city water connection. When using the fresh water tank, the water is pumped through the water lines by means of the water pump. When utilizing an exterior source, such as a campsite water supply, the pump is not needed as the water is already pressurized and will flow through the water supply lines within the trailer.

EXTERNAL HOOK-UP
Water provided from outside the recreational vehicle is pressurized by the system from which it is delivered. When you connect your recreational vehicle to an outside source, the fresh water tank and the water pump are kept separate from the remainder of the system by in-line check valves. (DO NOT turn the pump on if the fresh water tank is empty. Doing so could cause damage to the pump or a blown circuit may occur.)

Attaching to an Outside Source of Water
1. Remove the cap from the fresh water inlet on the side of the recreational vehicle.
2. Attach one end of the fresh water hose to the outside source of water.
3. Connect the other end of the hose to the RV city water inlet.
4. Turn on the outside source of water. Gradually open the hot & cold water at the sinks and tub to clear air from the lines. Close the faucets when the water is flowing freely.

NOTE: DO NOT TURN ON THE WATER PUMP WHEN USING WATER FROM AN EXTERNAL SOURCE. ONLY USE THE WATER PUMP WHEN OBTAINING WATER STORED IN YOUR FRESH WATER TANK.

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TO DISCONNECT FROM THE OUTSIDE WATER SOURCE

1. Turn off the outside source of water.
2. Disconnect the hose from the supply valve and the recreational vehicle inlet.
3. Remove the hose and store.
4. Reinstall the cap on the recreational vehicle inlet.

- FILL CAP FOR FILLING TANK
- CITY WATER FILL CONNECTS TO CAMPSITE WATER

When an outside source of water is unavailable, water can be drawn from the fresh water storage tank in the RV. The tank is filled through a gravity controlled water spout on the exterior of the vehicle.

FILLING THE FRESH WATER TANK:

1. Remove the water fill cap.
2. Water can now be added directly to the tank through the fill spout by use of a known clean hose or bucket, used only for this purpose.
3. When the tank is full, replace the water fill cap.

NOTE: WHEN FILLING THE SYSTEM, YOU MAY WANT TO ADD MORE WATER TO THE TANK TO REPLACE THE WATER USED WHEN FILLING THE HOT WATER TANK AND WATER LINES.

When traveling, you may want to drain the tank or keep the quantity of water to a minimum. This will reduce the total weight of the RV for travel. The location of the fresh water and the waste water tank drain valve will vary from unit to unit but is generally located beneath the unit, near the respective tank.

WATER TANK DRAIN VALVE

Water in the tank can be drained by turning the drain cock perpendicular (vertically) to the RV body. To close the valve, turn the lever parallel (horizontally) to the RV body.

NOTE: WHEN DRAINING THE TANKS, BE SURE THE WATER PUMP IS OFF.

NOTE: WHEN DRAINING THE ENTIRE ONBOARD FRESH WATER SYSTEM, BE SURE TO OPEN FAUCETS, WATER HEATER DRAIN AND SYSTEM LOW POINT DRAINS TO REMOVE ALL FRESH WATER FROM THE SYSTEM.

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PLUMBING

WATER PUMP

When using water from the fresh water tank, the system must be pressurized. A self-priming 12v DC pump is provided to handle this function. A pump ON-OFF switch is located on the monitor panel. The self-contained water pump is a demand system. This means the water pump will automatically turn on when a demand is made on the system.

Initial start-up of the water system

1. Be sure the tank is filled with water.
2. Open all faucets in the recreational vehicle, both hot and cold.
3. Place the pump control switch in the ON position.
4. Allow time for the hot water tank to fill. shut off each faucet as the flow becomes steady and free of air. When the last faucet is turned off, the pump should also shut off.
5. The system is now ready for use.

MONITOR PANEL

While there are several different styles of monitor panels, they all serve the same purpose. They measure and display information regarding levels for water, batteries and LP.

MONITOR PANEL

MONITOR PANEL

MONITOR PANEL

The monitor panel allows you to quickly check the levels in the fresh water and waste water tanks. Electrical sensors at various points on the tanks send signals to the monitor panel.
To check fluid levels, press and hold the TEST SWITCH designated for the tanks and read the level indicators on the panel. The indicator is proportioned in quarters with each light indicating the level

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that the tank contains. Sometimes, residue on the sides of a tank, or water with a low mineral content will give a false reading.

Check the levels occasionally when you are sure of a tank's contents and compare it to the reading on the monitor panel. If you are concerned about the accuracy of the monitor panel, have it checked at your local Service Center.

NOTE: REMEMBER THAT THE MONITOR PANEL HAS ADDITIONAL FUNCTIONS, SUCH AS DISPLAYING BATTERY AND LP LEVELS.

WATER PUMP

Sanitizing the Fresh Water System

Sanitize the system before initial use, after extended periods of non-use, at least once a year during continuous use, and if there is suspicion that the system has been contaminated.

To Sanitize the System:

- Prepare a chlorine solution using a gallon of water and ¼ cup of liquid household bleach, (5% sodium hypochlorinate solution.) Use one gallon of solution for each 15 gallons of tank capacity.
- With an empty tank and all faucets and drains closed, pour the solution into the fresh water tank.
- Completely fill the tank with fresh water.
- Switch on the water pump. Open all faucets one at a time until all air is purged and the water flows freely.
- Again, add fresh water to the tank until the water level reaches the fill spout.
- Allow the solution to stand in the tank, undisturbed, for at least 3 (three) hours.
- Drain the system by opening all faucets and the fresh water tank drain valve, while flushing the system with fresh water of drinking quality.
- Continue flushing the system, allowing the water to flow for several minutes.
- Close the tank drain valve and all faucets. Refill the system with water of known drinking quality.

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Waste Water System

The waste water system in your recreational vehicle can be described as two separate systems. A gray water system that consists of the drain lines and holding tank for waste water from the sinks and tub, and a black water system which includes the holding tank and drain for toilet wastes.

Each system is self-contained and allows disposal of waste water at designated dump stations at your convenience.

Components of the gray water system have drain traps, and both tanks (black tank for toilet waste, and gray tank for sinks and showers) are vented to equalize air pressure and disperse odors caused by drain water and wastes outside. Sometimes, the rocking movement of the recreational vehicle while driving may empty the drain traps of their water and allow odors of the gray water tank to enter the RV.

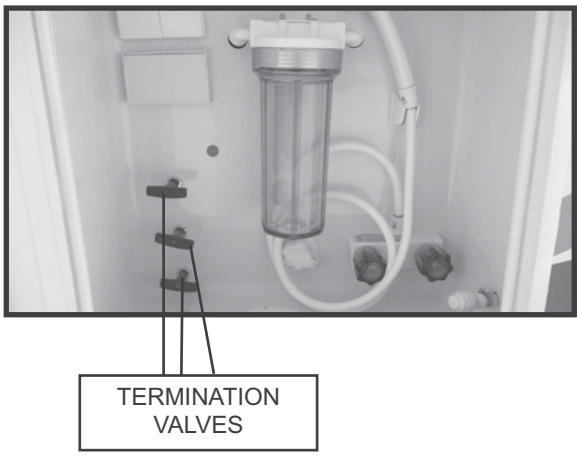
Residue in the drain water lines can also produce odors. To combat gray water holding tank odors, an approved deodorizing agent should be used. An agent that dissolves grease and fats and contains a detergent will help keep tanks and the lines clean and free flowing. You can obtain the deodorizer at most campgrounds and stores that carry camping equipment.

NOTE: IF CONNECTING TO A CAMPSITE SEWER INLET,

- **DO NOT OPEN TERMINATION VALVES UNTIL TANKS ARE ¾ FULL.**
- **DO NOT KEEP BLACK WATER VALVE OPEN WHILE PARKED.**

Waste is NOT flushed directly into the sewer system. Only liquid waste is drained, therefore water must accumulate and chemicals in tank need time to break down solids before they can be released.

If draining gray water tank directly into sewer inlet while parked, be sure to close termination valve for a period of time before leaving,allowing some water to accumulate in the tank to use for flushing drain line and flexible hose.



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HOLDING TANKS

Due to the vast array of floor plans and the necessary rearranging of plumbing systems, locations will alter, but in general, the holding tanks are located approximately beneath the bathroom area. Drain valves and drain hose storage are usually located on the driver's side.

The storage tanks are constructed of strong, light-weight polyethylene, which minimizes both weight and maintenance. Some models may have two gray water tanks and one black water tank.

Each tank has a separate drain line and dump valve, which permits dumping tanks individually or together. Each tank should be emptied often, at dump stations designated for this purpose. These dump stations are found at most campgrounds and are well marked. Many service stations, particularly along interstate highways, also have these facilities. Campground directories list dumping station locations across the nation.

If possible, dump holding tanks before a trip, to reduce the gross vehicle weight. Enough water should be kept in the black water tank to cover the bottom to prevent hardening of any residue that may remain. Never dump black water tank until it is ¾ full. This practice insures that enough water is in the tank to flush all wastes into sewer line. If necessary, fill the tank to the ¾ mark with additional water before draining.

Never put anything in the holding tanks other than normal drain water, wastes and biodegradable products. Paper wrappers, gum, cigarettes, etc., no matter how small, should NEVER be placed into either the gray or black tanks.

NOTE: YOU CAN FIND BIODEGRADABLE PAPER PRODUCTS AT MOST STORES THAT SELL CAMPING SUPPLIES AND AT CAMPGROUNDS THAT HAVE A STORE ON THE PREMISES. YOU CAN ALSO FIND CHEMICAL SUBSTITUTES FOR DEPOSIT INTO THE WASTE TANKS, IF YOU PREFER.

NOTE: IT IS IMPORTANT TO NOTE THAT HARMFUL AND TOXIC MATERIALS CAN ACCUMULATE IF THE HOLDING TANKS ARE NOT REGULARLY DRAINED AND THOROUGHLY RINSED. IT IS ALSO IMPORTANT TO USE HOLDING TANK DEODORIZING AND CLEANING AGENTS IN THE WASTE WATER TANKS TO REDUCE ORDERS AND KEEP THE LINES OPEN AND FREE FLOWING.

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To Empty the Holding Tanks

1. Remove the sewer drain hose from its storage compartment on the side of the coach.
2. Remove the cap from the RV drain and connect the drain hose to it.
3. Attach the other end of the flexible drain line to the dump station inlet. Be sure both ends of the flexible drain line are securely attached.
4. Drain the black water tank first, by pulling the termination valve handle toward you. Be sure to allow sufficient time for the tank to completely drain, then rinse the tank with several gallons of water by depressing the stool pedal or hand flush handle. Close the valve on the stool and let it fill before releasing to the tank. This creates additional force to flush the tank more completely.
5. Drain the gray water tank by pulling the termination valve handle toward you. Draining the gray tank last uses the soapy water in the tank to rinse the drain and flexible hose.
6. When tanks are emptied, close termination valves by pushing handles back to closed positions.
7. Remove flexible drain hose and wash it thoroughly with clean water. Remove the other end from the dump station inlet and replace it in its storage compartment. Secure the sewer hose storage cover, and replace the caps on both the recreational vehicle outlet and the dump station inlet.

Follow these guidelines to help ensure trouble-free operation:

- Never put anything in black water tank other than biogradeable RV toilet paper.
- Do not put automotive antifreeze, household toilet cleaners or drain cleaners, or any solid material into the waste water system.

- Always use chemicals in the black water system that are made especially for this purpose.
- When cleaning components of the waste water system, use cleaners made for RV systems.

- Always keep the drain cap in place and termination valves closed.
- After every third time the holding tanks are emptied, fill and flush both tanks with clean, fresh water a couple of times to keep them clear and clean.

NOTE: KEEPING THE BLACK WATER TANK CLEAN ALLOWS THE MONITOR PANEL TO ACCURATELY ASSESS THE STATIS OF THE TANK. ALWAYS REMEMBER TO CLEAN UP THE DUMP SITE BEFORE LEAVING. NEVER EMPTY YOUR HOLDING TANKS DIRECTLY ON THE GROUND, OR INTO A RIVER OR STREAM. DO NOT POLLUTE!

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PLUMBING

TOILET

The toilet installed in your recreational vehicle is connected to the pressurized fresh water system. A single lever arrangement controls flushing and the flow of water into the bowl.

- To add water to the toilet before using, lift the flush lever until the desired water level is reached. (As a general rule, more water is required only when flushing solids.)
- To flush the toilet, push the lever all the way down until the sewage leaves the toilet.
- Release the flush lever. A small amount of water should remain in the bowl.

Be sure to hold the flush lever down long enough to release the contents of the bowl, but not longeer than necessary as this will result in excessive water usage.

Unnecessary, frequent flushing of the stool will quickly deplete your fresh water supply and fill your holding tank. If the black water tank becomes full, you will no longer be able to flush thestool until the tank can be drained. Be sure all occupants and guests understand this operation.

Always use deodorizing agents specifically designed for use in holding tank systems and a good biodegradable tissue paper. These products are available directly from your dealer or any store that sells camp supplies.

NEVER use chlorine or caustic chemicals such as drain openers or laundry bleach in your toilet.
NEVER allow foreign objects (non-dissolving items) to be flushed through the toilet.

Don't allow a problem to go unsloved. As soon as you detect a problem, take the necessary steps to correct it. It is also a good idea to carry a few spare parts that will correct a small problem that may develop. These parts can be obtained from your dealer or larger campground stores. Refer to the toilet manufacturers' information in your Owner's packet to determine which part you may need, it's correct name and part number. (If you have a different toilet than the one described, follow the manufacturer's recommendations for cleaning and maintenance.)

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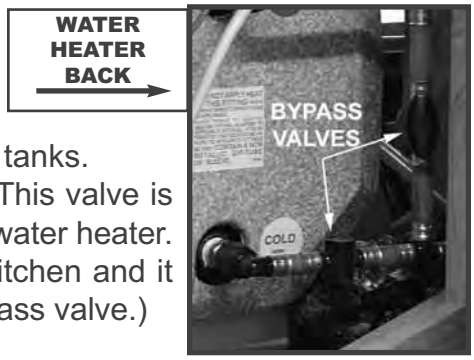
WATER SYSTEM WINTERIZATION

When storing your recreational vehicle through periods of freezing weather, in an unheated environment, it will be necessary to winterize the water system. Damage to water system components will result if the proper winterization steps are not taken.

NOTE: Before using the compressed air method, you will need a special adapter known as a blow-out plug. This plug allows compressed air to be delivered through the city water fill. This small, inexpensive adapter is available at most RV supply stores.

⚠WARNING **NEVER USE AUTOMOTIVE ANTIFREEZE IN YOUR FRESH WATER SYSTEM. AUTOMOTIVE ANTIFREEZE IS TOXIC AND NOT FOR USE IN POTABLE (DRINKABLE) WATER SYSTEMS.**

WINTERIZING WITH COMPRESSED AIR



(With By-pass Kit Installed)

Purchase 2 gallons of RV non-toxic antifreeze.

1. Drain the fresh water tank and empty the waste water holding tanks.
2. Turn the water heater bypass valve to the 'bypass' position. (This valve is located near the water heater incoming lines at the rear of the water heater. The water heater is usually located in a base cabinet in the kitchen and it may be necessary to remove an access panel to reach the bypass valve.)
3. Drain the water heater.
4. If you have a water filter system installed, remove the filter from the assemblyand discard. (You will need to purchase a new one and install it when de-winterizing your unit.)
5. Open all faucets, including shower head sprayer, (if applicable), toilet flushing device and any other water lines that are closed.
6. Turn on the water pump for at least 30 seconds to clear any water from the lines.
7. Connect an air hose with an adapter (blow out plug) to the city water fill connection.
8. Set the pressure to no greater than 30# (pounds) and blow out the water lines until no water can be seen coming out of the fixtures and lines.
9. Pour RV anti-freeze into drains, p-traps, toilet and tanks.

NOTE: DO NOT ATTEMPT TO START THE WATER HEATER OR USE THE PLUMBING SYSTEM AFTER THE SYSTEM HAS BEEN WINTERIZED. DEWINTERIZE, FLUSH AND SANITIZE THE WATER SYSTEM PRIOR TO USE.

'WARNING' INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.

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WINTERIZING WITH ANTIFREEZE ONLY

Purchase 4-6 gallons of RV approved, non-toxic antifreeze.

1. Drain all tanks, fresh water and sewage tanks.
2. Turn water heater bypass valve to 'bypass' position. (See picture on previous page.)
3. Drain water heater.
4. If you have a water filter system installed, remove the filter from the assembly and discard. (You will need to purchase a new one and install it when dewinterizing your unit.)
5. Fill the tank above minimum water pump operation level with the RV antifreeze. (Use of a long funnel may be helpful.)
6. Turn the pump switch 'ON' and open the cold water side of all faucet fixtures. Leave the faucets open until the antifreeze, (generally pink in color), flows out of the faucets. Repeat for the hot water side.
7. Flush toilet until antifreeze is visable inside the bowl and pour one gallon of antifreeze down the toilet to winterize the black holding tank.
8. Pour antifreeze down each shower/tub, lavatory sink and kitchen sink to fill p-traps.
9. To winterize gray tank(s), pour one gallon down each related sink drain.

DEWINTERIZING YOUR RV

NOTE: DO NOT ATTEMPT TO TURN ON THE WATER HEATER OR USE THE PLUMBING SYSTEM ONCE THE SYSTEM HAS BEEN WINTERIZED. DEWINTERIZE THE WATER SYSTEM, FLUSH AND SANITIZE PRIOR TO USE.

1. Drain all holding tanks, (fresh water and sewage).
2. Attach garden hose to fresh water fill and fill tank.
3. Turn 'ON' pump switch and open cold water side of all faucet/shower fixtures. Leave open until the water runs clear, (no pink residue). Repeat for the hot water side.
4. Flush toilet until clear water runs into bowl.
5. Dump tanks again.
6. Sanitize the water system. (Refer to that section in this manual)
7. If a water filter has been installed, drain the lines, remove the assembly, clean and reinstall using a new filter.
8. When ready to use the water heater, turn by-pass valve to open position to allow water to enter and fill the hot water heater tank.

NOTES:

SECTION 5
PLUMBING

WATER SYSTEM MAINTENANCE AND TROUBLESHOOTING

As with any mechanical system, your plumbing is subject to the development of problems. Most of these problems can be greatly reduced, if not eliminated, by following a schedule of planned inspections and maintenance. Neglect of proper maintenance procedures is the usual cause of most water system problems.

Road vibrations and shocks, as well as excessive pressure from some city water sources are the main physical causes of water system damage. It is important to inspect all plumbing joints and fittings often, for cracks and leaks. If left unchecked, water leaking from a plumbing joint can cause considerable damage .

A leak in the fresh water system should be suspected if the pump is running and all faucets and valves are closed. When the leaking fitting has been identified, attempt to stop the leak by tightening the fitting. DO NOT over tighten. Plastic fittings rarely need to be tightened with a wrench. If these fittings leak after tightening by hand disconnect the fitting and check for dirt, scale, or other foreign substances which may be causing the leak. Clean the fitting thoroughly and reinstall. If leaking persists, shut off the water supply until the fitting can be properly replaced. Check with your dealer for the correct method of replacement and replacement parts.

Proper winterization procedures of plumbing systems will normally be all that is necessary to prevent the damage caused by freezing. Freezing damage can harm any component of the system, including the water tank/s, toilet, pump and all piping. Be sure to follow the winterization procedures outlined in this manual. Also be sure to discuss with your dealer or repair center, any additional precautions that should be taken, to winterize your RVs plumbing system. Local climates vary and winter maintenance needs may be effected.

Be sure to read the literature supplied with plumbing components, such as the water pump, for troubleshooting tips. Also remember that it is possible for an electrical problem to cause water system problems. Lack of power to the pump can be caused by a variety of reasons.

If you are unsure of how to locate and/or repair a plumbing problem, it is best to have your dealer or a qualified plumber who is familiar with the RV water system, to inspect the system and perform any repairs needed.

END OF SECTION

NOTES:

SECTION 6
APPLIANCES

APPLIANCES

Due to the various floor plans, shapes and sizes of units, the RV industry uses many different brands of appliances. Therefore, all appliances can not be listed in this section. While we will attempt to touch on the major ones, please keep in mind your best resource is the specific appliance manual that came with your Owner's packet. It will detail the product used in the manufacture of your recreational vehicle. (If, by chance, you don't have the manual you need, many times you can find it on line where you will have the option of reading it or printing for your future use. Be sure you have the model number handy so you get the most accurate information.)

Each appliance in your RV is warranted by its' manfacturer. It is very important that you review all the literature provided in the Owner's packet that came with your RV. Fill out and mail any warranty registration cards required by the appliance manufacturers. If you have any questions regarding the operation of the appliances in your unit, contact your selling dealer. Also, please notify your dealer of any shortage of literature you may have.

It is important that you read all the manufacturer's information provided, regarding both operation and maintenance of the appliance. Pay close attention to all safety precautions given and follow them closely. Keep all literature, including this manual, with the recreational vehicle for easy reference. If service on any appliance is required, contact your dealer or an authorized service representative of the appliance manufacturer. For your convenience, most appliance manufacturers have toll free service telephone numbers. You will find some listed in the front of this manual under the heading of COMPONENT MANUFACTURERS.

RANGE/OVEN

TO PREVENT FIRE OR SMOKE DAMAGE

1. Keep area around appliance clear and free from combustible materials, gasoline, and other flammable vapors and materials.
2. If appliance is installed near a window, take proper precautions to prevent curtains from blowing over burners.
3. Never leave any items unattended on the cooktop. The hot air from the vent may ignite flammable items and may increase pressure in closed containers which may cause them to burst.
4. Avoid use or storage of aerosol cans near an appliance. Many are EXPLOSIVE when exposed to heat and may be highly flammable.
5. Do not leave plastic items on the cooktop as they may melt or soften. If this occurs, discard the container and contents, as the food could be contaminated.

NOTES:

SECTION 6
APPLIANCES

BELOW IS AN EXERPT FROM THE APPLIANCE MANUFACTURER'S USERS MANUAL REGARDING IMPORTANT SAFETY INSTRUCTION. REFER TO THE OVEN/RANGE MANUFACTURERS' USER MANUAL FOR MORE COMPLETE INSTRUCTIONS.

READ ALL INSTRUCTIONS BEFORE USING THIS APPLIANCE. THE FOLLOWING INSTRUCTIONS ARE BASED ON SAFETY CONSIDERATIONS AND MUST BE STRICTLY FOLLOWED TO ELIMINATE THE POTENTIAL RISKS OF FIRE, ELECTRIC SHOCK OR PERSONAL INJURY. HAVE YOUR APPLIANCE INSTALLED AND PROPERLY GROUNDED BY A QUALIFIED INSTALLER AND ACCORDING TO THE INSTALLATION INSTRUCTIONS. HAVE THE INSTALLER SHOW YOU THE LOCATION OF THE GAS SHUT OFF VALVE AND HOW TO SHUT IT OFF IN AN EMERGENCY.

TO ENSURE PROPER OPERATION AND AVOID POSSIBLE INJURY OR DAMAGE TO UNIT, DO NOT ATTEMPT TO ADJUST, REPAIR, SERVICE, OR REPLACE ANY PART OF YOUR APPLIANCE. ALL OTHER SERVICING SHOULD BE REFERRED TO A QUALIFIED INSTALLER OR SERVICER.

ALWAYS DISCONNECT POWER TO APPLIANCE BEFORE SERVICING

⚠WARNING **NEVER TURN EXHAUST FAN ON WITH FILTER SCREEN REMOVED. EXPOSED FAN BLADES POSE AN INJURY THREAT. DIRT AND GREASE DEPOSITS WHICH ARE NORMALLY TRAPPED BY THE FILTER ARE FREE TO BUILD UP IN THE RANG HOOD EXHAUST DUCT, CREATING A FIRE HAZARD.**

⚠WARNING **IT IS NOT SAFE TO USE COOKING APPLIANCES FOR COMFORT HEATING.**

The gas oven and burners are operated using LP gas. Cooking appliances need fresh air for safe operation. Before operating this appliance:

- Open an overhead vent or turn on an exhaust fan, **AND**
- Open a window.

Unlike homes, the amount of oxygen supply is limited due to the size of the recreational vehicle and proper ventilation when using the cooking appliance(s) will avoid dangers of carbon monoxide poisoning or asphyxiation.

The most common type RV range is a three or four burner built-in range with a glass oven door. It may light manually, or by using piezo ignition, which means there is no pilot light for the range. Be sure the main LP gas valve on the LP tank is in the 'ON' position.

'WARNING' INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.

NOTES:

SECTION 6
APPLIANCES

LIGHTING SURFACE BURNERS

The surface burners will feature either matchlit ignition or Piezo pilotless ignition. Be sure all control knobs are in the 'OFF' position before supplying gas to the appliance. Be sure the main LP gas supply is on before lighting the burner.

CAUTION **IF THE BURNER DOES NOT LIGHT WITHIN ABOUT 4 SECONDS OR IF THE FLAME SHOULD GO OUT DURING COOKING, TURN THE BURNER OFF. IF GAS HAS ACCUMULATED AND A STRONG GAS ODOR IS DETECTED, OPEN A WINDOW AND WAIT 5 MINUTES FOR THE GAS ODOR TO DISAPPEAR BEFORE RELIGHTING THE BURNER.**

NOTE: IF THE APPLIANCE HAS NOT BEEN OPERATED FOR A PERIOD OF TIME, THE SURFACE BURNERS MAY BE DIFFICULT TO LIGHT DUE TO AIR IN THE GAS LINE.

CAUTION **DO NOT TURN THE CONTROL KNOB 'ON' AND ALLOW GAS TO ESCAPE BEFORE LIGHTING THE MATCH.**

TO BLEED AIR FROM LINE

- Hold a lighted match next to the burner
- Turn the surface burner control knob to the LITE position
- When the burner lights, turn the knob back to the OFF position
- Depending upon your model, follow procedure for either 'Matchlit' ignition or 'Piezo' ignition.

MATCHLIT IGNITION

1. Place a pan on the burner grate.
2. Hold a lighted match next to the desired surface burner head.
3. Push in and turn the surface burner control knob to the LITE position.
4. When the burner lights, adjust the knob between HI and LOW to select the desired flame size.
5. After cooking, turn the surface burner knob to the OFF position.

PIEZO IGNITION

1. Place a pan on the burner grate.
2. Push in and turn the surface burner control knob to the 'LITE position. (IMPORTANT: Only light one surface burner at a time.)
3. Immediately, rotate the TOP BURNER IGNITOR knob to the right (clockwise) several clicks until the burner lights. The burner should light within 6 clicks or one full rotation of the knob.

CAUTION' **INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN VEHICLE DAMAGE OR MINOR TO MODERATE INJURY.**

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4. When the burner lights, adjust the surface burner control knob between HI and LOW to select the desired flame size.
5. After cooking, turn the surface burner control knob to the OFF position.

If the piezo ignitor is not functioning:

- Be sure all controls are in the 'OFF' position
- Hold a lighted match to the desired surface burner head (DO NOT turn the control knob ON and allow gas to escape before lighting the match.)
- Push in and turn the surface burner control knob to the LITE position
- When the burner lights, adjust the knob between HI and LOW to select the desired size
- After cooking, turn the knob to the 'OFF' position

CAUTION **WHEN THE RECREATIONAL VEHICLE IS NOT IN USE OR WHILE TRAVELING, TURN ALL KNOBS TO THE OFF POSITION AND TURN OFF THE MAIN GAS SUPPLY.**

USING THE OVEN (DO NOT cover bottom or entire rack with aluminum foil.)

The oven features pilot ignition. Be sure all control knobs are in the OFF position before supplying gas to the appliance. Be sure gas supply to the appliance is on before lighting pilot or oven burner. If the apliance has not been operated for a period of time, the oven pilot may be difficult to lite due to air in the gas line.

TO LIGHT OVEN PILOT:

1. Be sure all controls are in the OFF position.
2. Push in and turn the OVEN knob to the PILOT ON position.
3. Open the oven door and locate the oven pilot (beneath the oven botton, on the left side of the burner.) While pushing in the knob, hold a match next to the oven pilot for 10-15 seconds or until a small flame is visable without needing to continue to drpress the knob.
4. Once the pilot is lit, leave the OVEN knob in the PILOT ON position if you wish to use the oven. The standing pilot will remain lit if the OVEN knob is left in the PILOT ON position. If the OVEN knob is turned to the OFF position, gas supply to the pilot will be turned off and the standing pilot flame will extinguish. Since each oven has its own personal baking characteristics, do not assume your new oven will perform exactly like your previous one. You may find that the cooking times,oven temperatures and cooking results differ somewhat from your previous range. Allow a period of adjustment.

NOTE: A DELAY IN THE TIME IT TAKES TO LIGHT THE PILOT MAY SIGNAL A NEED TO BLEED AIR FROM THE LINE.

CAUTION' INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN VEHICLE DAMAGE OR MINOR TO MODERATE INJURY.

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OVEN KNOB

The OVEN knob is used to select and maintain the oven temperature. Push in and turn this knob just to the desired temperature. DO NOT set it at a higher temperature then turn it back. Setting it at the desired temperature will provide more acurate oven temperature.Turn this knob to the PILOT ON position if you wish to use the oven. The oven standby pilot will remain lit. Turn the knob to the OFF position if the oven will not be used or when traveling.

SHUTDOWN INSTRUCTIONS:

When the recreational vehicle is not in use or while traveling, turn the OVEN knob to the OFF position and turn off the main gas supply. This will turn off the oven pilot.

NOTE: THE MAXIMUM RECOMMENDED PAN SIZE IS 13 x 9 x 2 ” CAKE PAN, 14 x 10 x 2” COOKIE SHEET, OR 10” FOR A SKILLET. DO NOT USE CANNERS OR OVERSIZED COOKWARE. THE PAN SHOULD NOT BE MORE THAN ONE INCH LARGER THAN THE BURNER GRATE.

MICROWAVE OVEN

General Use

- DO NOT attempt to defeat or tamper with safety interlocks.
- DO NOT place any object between the oven front frame and the door.
- DO NOT allow residue to build up on sealed surfaces.
- DO NOT subject the oven door to strain or weight
- DO NOT operate the oven if door seals are damaged, door is bent, or if door hinges are loose or broken.
- DO NOT operate the oven empty.
- DO NOT attempt to dry clothing, newspapers or other material in the oven.
- DO NOT use recycled paper products as they may contain impurities which may cause sparks or fires.
- DO NOT hit or strike the control panel with hard objects.

General Operation

- The oven light in the microwave oven is on only during operation or if the door is open.
- The oven automatically cooks on full power unless set to a lower power level.
- When the STOP/CLEAR pad is touched during the oven operation, the oven stops cooking and all information is retained. To erase all information (except the present time), touch the STOP/CLEAR pad once more. If the oven door is opened during operation, all information is retained.
- If the START pad is touched and the oven does not operate, check the area between the door and door seal for obstructions and be sure the door is closed securely. (The oven will not start cooking until the door is completely closed or the program has been reset.)

NOTES:

- There may be a child safety lock on your oven. (Check the manufacturers user guide.) To set, press STOP/CLEAR pad for 3 seconds and LOCK indicator appears with a 'beep' sound. To cancel, press STOP/CLEAR pad for 3 seconds and LOCK indicator disappears with a beep.

Food

- DO NOT use your microwave oven for home canning.
- DO NOT use the maximum recipe cooking time unless you have previously done so.
- DO NOT heat eggs in the shell.
- DO NOT cook potatoes, apples, egg yolks, and sausages without first piercing the surface.
- DO NOT attempt to deep fry with fat in your microwave oven.

REFRIGERATOR

Most RV refrigerators operate on the absorption system. In an absorption refrigeration system. ammonia is liquefied in the finned condensor coil at the top rear of the refrigerator. The liquid ammonia then flows into the evaporator (inside the freezer section) and is exposed to a circulating flow of hydrogen gas, which causes the ammonia to evaporate, creating a cold condition in the freezer. **When starting the refrigerator for the first time, the cooling cycle may require up to four hours of running time before the cooling unit is fully operational.**

Leveling

Leveling is one of the requirements for proper operation with absorption refrigerators. Any time the vehicle is parked for several hours with the refrigerator operating, the vehicle should be leveled to prevent loss of cooling. If the refrigerator is operated when it is not level and the vehicle is not moving, liquid ammonia will accumulate in sections of the evaporator tubing. This will slow the circulation or in severe cases, completely block it, resulting in a loss of cooling. When the vehicle is moving, the rolling and pitching movement of the vehicle will help to keep the liquid ammonia from accumulating.

Automatic Energy Selector System

The refrigerator may be equipped with an automatic energy selector system, either a 2 way or 3 way system. This system can be set, by the user, to be fully automatic (when AUTO mode is selected) or to operate on LP gas only (AUTO mode is OFF) or DC (battery). If the user turns the refrigerator on AUTO mode, the AES system will automatically select the most suitable energy source available, either 120 volt or LP gas, or DC.

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Auto Mode

When on AUTO mode, the control system will automatically select between 120 volt (AC) and LP gas, or on a 3 way system, DC current. AC (electricity) has priority over GAS and DC current has priority over both. (If the CHECK indicator lamp is on, the lamp will not turn off until the ON/OFF button is pressed OFF and then ON again.)

Gas Mode

This mode provides LP gas only. The control system activates the ignition system and attempts to light the burner for a period of approximately 45 seconds, at 2 minute intervals. If unsuccessful, the CHECK indicator lamp will illuminate.

If the CHECK indicator lamp is illuminated on the control panel, the controls have failed to ignite the burner. To restart an ignition attempt when the CHECK lamp is illuminated (or to turn off the CHECK lamp), press the ON/OFF button to OFF and back to ON again. The control system activates the ignition system and makes three attempts to light the burner. If, after the 3 attempts, it fails to ignite, restart the ignition sequence by again pressing the ON/OFF button to OFF and then back to ON.

DC Mode

When DC mode is chosen, the refrigerator will operate by pulling power from the battery/s. In most cases, the refrigerator controls will continue to opperate when the battery is down to 9.6V DC, causing a drain on the battery. **WHEN IN AUTO MODE, IF THE REFRIGERATOR FAILS TO OPERATE, REFER TO THE MANUFACTURERS USER MANUAL PROVIDED WITH THE FOREST RIVER OWNER'S PACKET.**

PURGING AIR FROM THE LINES

If the refrigerator has not been used for a long period of time or if the LP tanks have just been refilled, air may be trapped in the supply lines. Purge the air from the lines by pressing the ON/OFF button to OFF and then back to ON, 3-4 times. If repeated attempts fail to start the LP gas operation, check to make sure the LP tanks are not empty and that all manual shutoff valves in the lines are open.

DO NOT continue to reset GAS operation if the CHECK indicator lamp continues to be illuminated after several tries. If the problem persists, please contact a Service Center for assistance.

NOTES:

SECTION 6
APPLIANCES

DANGER **WHEN REFUELING OR PARKED NEAR GASOLINE PUMPS, SHUT OFF ALL LP GAS APPLIANCES. FAILURE TO HEED THIS WARNING COULD CAUSE A FIRE OR EXPLOSION RESULTING IN DEATH OR SEVERE PERSONAL INJURY AS WELL AS DAMAGE TO THE CAMPER AND/OR SURROUNDING AREA.**

FURNACE

BEFORE OPERATING THE FURNACE CHECK THE LOCATION OF THE FURNACE VENT TO BE SURE IT WILL NOT BE BLOCKED BY THE OPENING OF ANY DOOR ON THE TRAILER (OR BY EXTERIOR ITEMS SUCH AS A BUSH OR A TREE.)

Tips to assure continued safe operation of the furnace.

1. Inspect furnace venting. Venting must be free of obstruction and soot
2. Periodically observe the main burner flame to ensure it is burning with a hard blue flame. If the flame appears yellow or lazy, shut the furnace down. The burner may need to be cleaned or replaced.
3. Keep the furnace area clear of any combustible materials.gasoline or other flammable vapor and liquids.

NOTE: TO PROPERLY OBSERVE BURNER OPERATION, THE FURNACE MUST BE REMOVED. THIS SHOULD ONLY BE DONE BY YOUR DEALER OR A QUALIFIED SERVICE CENTER.

WARNING **DO NOT INSTALL SCREENS OVER THE VENT FOR ANY REASON. DOING SO CAN CAUSE UNSAFE FURNACE OPERATION.**

WARNING **SHOULD OVERHEATING OCCUR OR THE GAS SUPPLY FAIL TO SHOUT OFF, SHUT OFF THE MANUAL GAS VALVE TO THE APPLIANCE BEFORE SHUTTING OFF THE ELECTRICAL SUPPLY.**

WARNING **BE SURE THE FURNACE AND ALL IGNITION SYSTEMS ARE 'OFF' DURING REFUELING AND WHILE VEHICLE IS IN MOTION.**

WARNING **READ THE FURNACE MANUFACTURERS USERS MANUAL. IF THE INFORMATION IN THE MANUAL IS NOT FOLLOWED EXACTLY, A FIRE OR EXPLOSION MAY RESULT, CAUSING PROPERTY DAMAGE, PERSONAL INJURY, OR LOSS OF LIFE.**

If You Smell Gas:

- Extinguish any open flame.
- Evacuate all persons from the vehicle. EXIT
- Shut off the gas supply at the gas container or source.
- Do not touch any electrical switch or use the phone or radio in the vehicle.
- Do not start a generator.
- Contact the nearest gas supplier or qualified service center for repairs.
- If you can not reach a gas supplier or qualified service center, call the fire department. EMERGENCY CALL 911

WARNING **DO NOT TURN ON THE GAS SUPPLY UNTIL THE GAS LEAK(S) HAS BEEN REPAIRED.**

YOU, AS THE OWNER/USER, SHOULD INSPECT THE FURNACE MONTHLY DURING THE HEATING SEASON FOR PRESENCE OF SOOT ON THE VENT. THE PRESENCE OF SOOT INDICATES INCOMPLETE COMBUSTION. OPERATING THE FURNACE UNDER THIS CONDITION COULD LEAD TO SERIOUS PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE. IF SOOT IS OBSERVED ON THE VENT, IMMEDIATELY SHUT THE FURNACE DOWN AND CONTACT A QUALIFIED SERVICE AGENCY.

'WARNING' **INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.**
DANGER! **INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.**
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SECTION 6
APPLIANCES

HOT WATER HEATER

CAREFULLY FOLLOW THE WATER HEATER MANUFACTURERS DETAILED INSTRUCTIONS REGARDING THE CORRECT OPERATION OF YOUR WATER HEATER. FAILURE TO DO SO COULD VOID YOUR WARRANTY.

Hot water heaters require very little care. However, the most common cause of problems with your water heater is initiating operation before the tank is filled with water. Even running it for a brief period of time without water will damage the electric heating element.

Prior to operating the RV water heater for the first time, be sure there is water in the water heater tank. Be sure that the water heater by-pass valve, if installed, is open, to allow water flow into the tank. Next, connect the RV to a water source or turn on the onboard water pump. Open a hot-water tap and wait until water is flowing, with no air in the line. When water is flowing from the tap, the water heater tank is full, and it is safe to operate the water heater.

⚠WARNING **DO NOT STORE OR USE GASOLINE OR OTHER COMBUSTIBLE MATERIALS OR LIQUIDS NEAR OR ADJACENT TO THE WATER HEATER OR ANY OTHER APPLIANCE.**

Automatic Shut Off

The water heater is equipped with a high tempeerature limit switch, which will shut down the water heater if the temperature reaches above $180^{0.}$ If the limit switch should fail, the water heater is equipped with a pressure relief valve which is designed to open, if the temperature of the water reaches 210 degrees F, or if excessive pressure builds up .The valve will close automatically once the pressure falls below 50 PSI. Until the pressure falls below 50 PSI, dripping may occur. This normal and indicates the pressure relief valve is functioning properly by releasing pressure, causing temporary dripping.

Water Odor

Odor from the water is not a warranty or service issue. Many water supplies contain enough sulphur to produce a 'rotten egg' odor. It is not harmful, only unpleasant. The solution is to chlorinate the water. You may add about 6 ounces of common household liquid bleach per 10 gallons of water in the tank.

Run the chlorinated water throughout the system, opening each faucet one at a time until you smell the chlorine. Do not operate the water system for a couple hours, allowing the chlorine to take care of the problem. However, then you must remove the chlorine by flushing the system with fresh water. You may need to do this more than once. If this process does not remove the smell from the water, you may need to replace the anode rod. You may also consider adding a filtering system as a preventive measure.

'WARNING' **INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.**

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SECTION 6
APPLIANCES

IF YOU SMELL GAS

⚠WARNING

- DO NOT light any appliance.
- DO NOT touch any electric switch.
- DO NOT use any telephone in the unit.
- Immediately call your gas supplier from an outside phone. Follow the gas suppliers' instructions.

NOTE: IF YOU CANNOT REACH YOUR GAS SUPPLIER, CALL THE FIRE DEPARTMENT.

TURN OFF WATER HEATER

1. Turn switch to OFF position.
2. Turn off electrical power to the appliance.
3. Turn off gas supply.
4. If vehicle is to be stored or heater is going to be turned off while subject to freezing temperature, drain the water heater.

STORAGE AND DRAINING

If your RV will be stored during winter months, drain the water heater to prevent damage from freezing.

1. Turn off electrical power to water heater either at the switch or the breaker.
2. Shut off gas supply to water heater.
3. Turn off water pump on main water system.
4. Open both hot and cold water faucets.
5. Remove anode rod from tank.

Refer to Section 5 of this manual regarding draining and/or winterizing your water system.

WINTERIZING

If your water heater plumbing system is equipped with a bypass kit, use it to close off the waterheater, drain it completely and leave it closed, (in the bypass position). If you are introducing anti-freeze into the system, be aware that it can be very corrosive to the anode rod causing premature failure and leaving heavy sediment in the tank.

If the plumbing system is not equipped with a bypass kit and you intend to winterize by adding antifreeze, remove the anode rod (storing it for the winter) and replace it with a 3/4" drain plug. For more information regarding this process, contact your dealer.

'WARNING' INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.

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SECTION 6
APPLIANCES

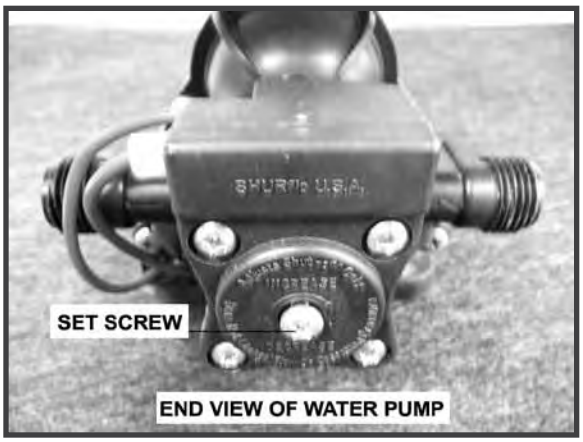
WATER PUMP
The water pump supplied with your RV is designed to deliver smooth, consistent flow of water at all ranges of operation, while drawing only a low current.

OPERATION
Pump cycling may be caused by excessive pressure created by one or more of the following, within a plumbing system:

- Low flow from partially open faucet.
- Water filters not on separate feed lines.
- Clogged water filters.
- Restrictive elbows and valves as possible in the first 2 feet after the pump.
- Flow restrictors in faucets and showerheads.
- Long lengths of small I.D. (inside diameter) lines.
- If replacing pipe/tubing, be sure it is at least 1/2” I.D. for main lines.

To minimize cycling, consider removing plumbing restrictions or install an accumulator after the pump. Cycling should be minimized to prevent pulsing flow and to achieve maximum pump life.

If the pump is cycling rapidly, increase the setting by turning the screw clockwise $1^{1/2}$ turns maximum, until the pump operates for 1 second, with at least 2 seconds of ‘off time’.



END VIEW OF WATER PUMP

DANGER

DO NOT USE AUTOMOTIVE ANTIFREEZE TO WINTERIZE POTABLE (DRINKABLE) WATER SYSTEMS. SUCH SOLUTIONS ARE HIGHLY TOXIC. INGESTION MAY CAUSE SERIOUS INJURY OR DEATH.

DANGER! INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.

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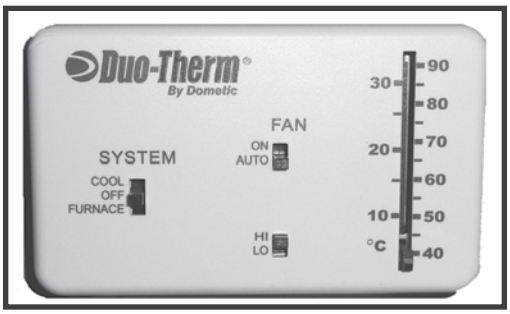
SECTION 6
APPLIANCES

THERMOSTAT - HEATING AND COOLING



Many factors influence the ambient temperature inside your RV. The purpose of a thermostat is to keep the air temperature at the level you have selected.

There are several things you can do to help manage the inside temperature, to avoid over-stressing your heating and cooling appliances.

HEATING

1. Check to be sure there are no gaps in windows or doors that would allow loss of heat.
2. Park the RV so the front or rear of the unit takes the brunt of wind force.
3. Have your furnace checked to ensure it is operating at its' highest capacity.
4. Keep all vents free of obstruction.

Setting the temperature and leaving the thermostat on AUTO, will allow the device to detect changes in temperature. While some people lower the temperature at night or when leaving the RV, when you return and reset the thermostat, the furnace or air conditioner, has to run longer to reach the new temperature you set. It is recommended to set it at a comfortable temperature and leave it.

COOLING

1. Park the RV in a shaded area.
2. Use window shades, blinds or curtains.
3. Keep windows and doors shut or minimize usage.
4. Avoid the use of heat producing appliances.
5. Installing window awnings will reduce heat gain by removing direct exposure to the sun.

Starting the air conditioner in the morning and giving it a head start on the expected high outdoor ambient temperature will greatly improve its ability to maintain the desired indoor temperature.

Whether using the HEATING or the COOLING function of your thermostat, condensation is always an issue. Keeping your RV at a constant temperature helps keep condensation at a minimum. For more information on the effects of condensation on your RV, refer to Section 4 in this manual.

TELEVISION

Due to the large selection of televisions used in the manufacturing of Forest River RVs, it is impossible to list all of them in this manual. Therefore, you will find general information that will be applicable to most all televisions. For more detailed information regarding the specific television/s installed in your RV, please refer to the television manufacturer's users guide included in your Forest River Owner's packet.

Your RV is prewired for cable. Televisions run on 12 volt and 110 volt power. Your coach must be connected to shore power, have the generator (optional) running or the inverter (optional) connected for the TV to operate.

SECTION 6
APPLIANCES

TELEVISION ANTENNA

The optional roof mounted antenna control is located in the ceiling of the lounge/kitchen area and/or in the bedroom. The antenna can only be used when the recreational vehicle is parked.

TO RAISE THE ANTENNA

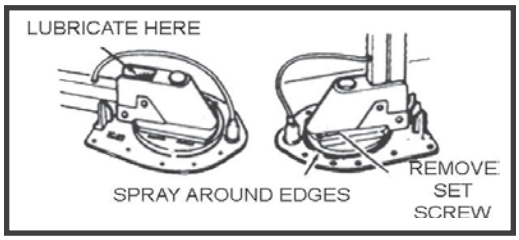
CHECK YOUR PARKING LOCATION FOR OBSTRUCTIONS BEFORE RAISING THE ANTENNA. ALSO BE SURE THE POWER BOOSTER SWITCH IS IN THE ON POSITION.

1. Crank the HANDLE in the UP direction as indicated by the arrow on the large control knob.
2. Continue to rotate the handle until you feel resistance (about 13 turns).
3. **DO NOT** force the handle beyond the point that resistance is felt.
4. When the antenna is up, fine tune the signal by grasping the large rotating KNOB, pulling it slightly down and turning it until the clearest picture and sound are available.
5. To lower the antenna, rotate it with the large control knob until the pointer on the control knob lines up with the pointer on the ceiling plate. The antenna can now be lowered by cranking the handle in the down direction. Continue to rotate the handle until you feel resistance (about 13 turns.) To be sure the antenna is working properly, tune the TV receiver to the nearest station and rotate the antenna until you get good picture and sound. Then, turn off the switch on the power booster.

NOTE: BEFORE LEAVING THE CAMPGROUND, <u>BE SURE</u> THE ANTENNA IS LOWERED

Be sure to turn off the power booster when not in use. The booster can drain the battery if allowed to remain continuously activated. There is a red indicator light on the power booster which is illuminated when it is on.

TV ANTENNA



To lubricate the elevating gear, apply a liberal amount of silicone spray lubricant to the elevating gear with the lift in the DOWN position. Run the lift up and down several times to distribute the lubricant to the gears.

If rotating the antenna becomes difficult, normal operation can be restored by lubricating the bearing surface between the rotating gear housing and the base plate. Any spray type silicone lubricant may be used.

Elevate the antenna and remove the set screw from the rotating gear housing (see illustration). Spray lubricant into hole and around the edges of the gear housing. Rotate the gear housing until the lubricant coats the bearing surfaces and the antenna rotates freely. Reinstall set screw.

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SECTION 6
APPLIANCES

AIR CONDITIONER

Your recreational vehicle may be equipped with an optional roof mounted air conditioner. It operates on 110 volt power and is located in the living/dining area and also in the bedroom area of some models. Your RV may have come, factory equipped, with the wiring and necessary bracing for the insertion of an air conditioner, even if it was purchased without the air conditioner installed at the factory. Check with your dealer for additional information.

Refer to the air conditioner manufacturer's users' manual for complete operating and service instructions. Efficiency when using the air conditioning can be increased by closing all windows and curtains and parking your RV in the shade. Air conditioning consumes a large portion of the electric power available in the recreational vehicle and efficient operation can be an important consideration.

Even though your recreational vehicle is equipped with 30 or 50 amp capabilities, be aware that some campgrounds may offer less than 30 amp service. Check with the campground before utilizing excessive power, which may create a fire hazard or trip breakers, in either the recreational vehicle, or the outside power source.

NOTE: ALWAYS TURN OFF AIR CONDITIONER (AND ALL ELECTRICAL APPLIANCES) BEFORE DISCONNECTING THE RV FROM ITS' 110 VOLT POWER SOURCE.

NOTE: IF YOU COVER THE OUTSIDE PORTION OF YOUR AIRCONDITIONER DURING PERIODS OF STORAGE, BE SURE TO REMOVE PROTECTIVE COVER BEFORE REUSING.

CONVERTER/BATTERY CHARGER

The power converter is designed to supply the nominal 12 volt filtered power for all 12 volt operated devices. Although the converter is an excellent battery charger, the converter does not require a battery to be connected to it for proper operation. Average charge rate will depend on several variables such as, condition of the battery(s), temperature, and the length of time the battery(s) are connected to the converter.

NOTE: WHEN INSTALLING A BATTERY/S, ALWAYS OBSERVE POLARITY. CONNECTING A BATTERY WITH REVERSE POLORITY WILL BLOW THE POWER CONVERTER OUTPUT FUSES. IF THE 12 VOLT LOAD EXCEEDS THE CONVERTER OUTPUT, THE VOLTAGE WILL DROP TO PREVENT ANY FURTHER INCREASE IN CURRENT. TURNING OFF UNNECESSARY LIGHTS AND/OR APPLIANCES WILL LOWER POWER REQUIREMENT AND THE OUTPUT VOLTAGE WILL AUTOMATICALLY RESTORE.

END OF SECTION

NOTES:

SECTION 7
CARE AND MAINTENANCE

GENERAL CARE AND MAINTENANCE

Periodic maintenance and cleaning of your recreational vehicle is necessary to retain the dependability, safety and appearance that will provide you with many miles of trouble free operation as well as protecting your investment.

Keep good records of maintenance functions performed and be sure to follow all owner obligations as may be required by the chassis manufacturer to keep your warranty in force.

It is also important to note that operating conditions will effect service timetables. Driving in extreme conditions such as heavy dust, continuous short trips, or start and stop heavy traffic means that the length of time between service appointments will be shortened. Discuss service timetables with both your dealer and chassis service representative.

Preventative maintenance will pay for itself many times over by catching or preventing problems before they occur. Many repair costs are greatly increased by ignoring problems when they are small ones, allowing them to build into larger problems and possibly voiding your warranty due to neglect, misuse or abuse. If left unattended, small problems may also begin to effect other parts and systems of the recreational vehicle .

FIBERGLASS SIDING

The care of fiberglass siding is basically the same as any automotive finish. Any finish will deteriorate with time. Dulling and fading can be increased by exposure to extreme sunlight, air pollutants and excessive moisture. Regular washing will help prevent this from occurring. If surface deterioration such as yellowing or chalking occurs, for proper procedure, consult with your dealer.

- Wash the exterior monthly with warm water and a mild detergent.
- Avoid spraying water directly into refrigerator and furnace vents.
- Immediately remove bird droppings, tree sap, insects and tar to avoid staining.
- Wax at least once a year with a standard liquid or paste wax.
- Prolonged storage of unit should be in a sheltered environment, when possible.

NOTE: PHYSICAL DAMAGE TO FIBERGLASS SHOULD BE ADDRESSED IMMEDIATELY TO AVOID MOISTURE ENTERING THROUGH BREAKS AND CAUSING PROBLEMS WITH INTERIOR WALLS AND COMPONENTS. COVER BREAKS IN THE FIBERGLASS WITH PLASTIC, SEALING THE EDGES WITH TAPE UNTIL PROPER REPAIRS CAN BE MADE.

NOTES:

SECTION 7
CARE AND MAINTENANCE

SEALS AND ADHESIVES

It is important to maintain the seals and adhesives to prevent moisture from entering and destroying recreational vehicle components. When washing your RV, inspect the seals for signs of drying out and wear. Be aware that weather and road vibration will have an effect on seals, causing them to dry, crack or separate. If you are unsure what to look for, have your dealer instruct you regarding the correct method for renewing the seals, or you may prefer to have the dealership inspect and reseal your unit, if necessary.

⚠WARNING FAILURE TO MAINTAIN SEALS THROUGH REGULAR MAINTENANCE CAN LEAD TO DAMAGE AND MAY BE CONSIDERED ABUSIVE TREATMENT UNDER TERMS OF YOUR RECREATIONAL VEHICLE WARRANTY.

WINDOWS AND DOORS

Check the seals around the windows regularly, if sealant is present. Follow the above instructions for care and maintenance of window and door seals and repair as necessary and if applicable.

Adjust and lubricate latches and moving parts annually, to insure windows remain operative. Also check the condition and operation of door locks, adjusting and lubricating as necessary.

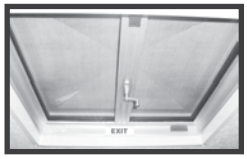
Vinyl seals around windows and doors should be cleaned regularly and kept flexible by using a silicone spray or lubricant. Be sure to follow the directions on the product container.

Keep screens and window slides clean and free of debris. Periodically test the operation of all windows and their components.

If you are unsure about the correct methods of lubrication and adjustment, check with your dealer.

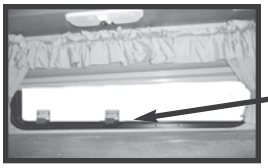
⚠WARNING MOISTURE CAN ACCUMULATE IN LOCKS AND HINGES OF WINDOWS AND DOORS, CAUSING DAMAGE OR FAULTY OPERATION. DO NOT FORCE THE OPERATION OF THESE COMPONENTS IN FREEZING WEATHER.

⚠WARNING **DO NOT** COVER EMERGENCY WINDOW(S). THESE EXIT WINDOWS MUST REMAIN ACCESSIBLE AT ALL TIMES. BE SURE ALL OCCUPANTS AND GUESTS KNOW WHICH WINDOWS ARE THE EMERGENCY EXIT WINDOWS AND UNDERSTAND HOW TO USE THEM.



EMERGENCY EXIT
CEILING VENT

EMERGENCY
EXIT WINDOW



'WARNING' INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.

NOTES:

SECTION 7
CARE AND MAINTENANCE

FRAME, EXTRUSIONS AND ALUMINUM SURFACES

Check the condition of the frame regularly. Keep it clean and repaint as necessary, to help avoid rust. It is especially important to keep underbody components clean when driving the recreational vehicle in the winter in areas where road salts are used.

To help avoid surface pitting, clean and wax all extrusions when waxing RV sidewalls. Special aluminum cleaners are available to restore the original luster to aluminum surfaces. Be sure to follow the instructions for use as outlined on the product package.

ROOF

Inspection of roof components at least twice a year is very important to make sure seams and seals are not cracked or worn. Proper maintenance of seals is necessary to keep moisture from entering and causing severe damage such as rot, mold or mildew. If you encounter dry, cracked or weathered seals, reseal or replace as necessary. Check with your dealer for the type of caulking required for rubber roofs and correct methods of resealing or replacing. A mild household soap solution and a soft brush can be used to clean a rubber roof.

⚠WARNING IF YOUR ROOF SHOULD BECOME PUNCTURED OR RIPPED, COVER THE PUNCTURE OR TEAR TO SEAL OUT MOISTURE AND HAVE IT REPAIRED IMMEDIATELY.

⚠WARNING USE CAUTION WHEN STORING ITEMS ON THE ROOF. IF A FACTORY INSTALLED ROOF RACK AND/OR LADDER ARE PRESENT, THE ROOF HAS BEEN REINFORCED. IF YOU HAVE AN AFTERMARKET ROOF RACK OR LADDER, USE EXTREME CAUTION WHEN ON THE ROOF. CHANCES ARE THAT YOUR ROOF HAS NO REINFORCEMENT AND YOU MAY NEED TO USE BOARDS ACROSS THE ROOF FOR TEMPORARY REINFORCEMENT. (REMEMBER TO REMOVE THE BOARDS WHEN LEAVING THE ROOF AREA.)

LP GAS SYSTEM

To ensure proper operation, have the LP gas system checked frequently for leaks and road damage. The entire system including regulator pressure, should be checked annually or sooner, if you suspect a problem. Have the system checked by a qualified LP gas service technician using proper equipment. The method of checking the system for leaks and LP gas safety precautions can be found in Section 4 of this manual.

NOTE: LINE PRESSURE FOR LP GAS APPLIANCES SHOULD BE CHECKED AT LEAST EVERY SIX MONTHS. MOST LP GAS SUPPLIERS HAVE EQUIPMENT TO TEST THE LINES. THE CORRECT LINE PRESSURE FOR ALL RV LP GAS APPLIANCES, IS 11 INCHES OF WATER COLUMN PRESSURE.

EXTERIOR LIGHTS

Check the operation of exterior lights often. Check clearance, turn signal, brake and back-up lights to be sure they are working correctly. Replace any cracked, broken or missing light covers to avoid moisture infiltration and possible damage to their electrical system.

'WARNING' INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.

SECTION 7
CARE AND MAINTENANCE

WINTER PRECAUTIONS

- **Water Systems** - In severe cold it is wise to monitor the water temperature in the tank and take steps to drain and winterize if necessary. It is also a good idea, in severe cold, to open lower cabinet doors in the kitchen and bath to allow warm air to circulate around water fixtures. To minimize freezing damage, insulate drain lines exposed to the outside.
- **FOOD Storage** - If left in an unheated RV for a period of time, canned goods and other foods packed in water should be stored as high as possible since heat rises. Refrigerators can also be used for storage, even when unplugged, as they are well insulated.
- **Heating** - Use ONLY the RV furnace for heating as it is properly vented to the outside. NEVER USE THE RANGE FOR HEATING AS FIRE, CARBON MONOXIDE OR ASPHYXIATION COULD RESULT.
- **Condensation** - Moisture can collect on inside surfaces during cold weather when inside humidity is high. While the trailer is in use, a family can vaporize up to three gallons of water daily through daily living. Consider using a dehumidifier to remove moisture. See Section 4 of this manual for additional tips regarding condensation.

STORAGE TIPS

1. Park your RV on a level surface.
2. Winterize the chassis and the generator (optional) as outlined in the chassis and the generator owner's manuals.
3. Clean your recreational vehicle thoroughly, inside and out, as previously outlined in this section.
4. Turn off all electrical switches and appliances.
5. Close all shades and curtains. Consider protecting the curtains from sun fade by placing foil or paper between the windows and the screens.
6. Be sure all windows, doors and vents are securely closed. Cover exterior appliance vents to prevent moisture and insects from entering during storage.
7. Check the interior of the RV periodically to be sure leaks have not developed or that condensation has not formed, causing damage to interior components. Condensation can most readily be observed as moisture accumulation on windows and mirrors. To reduce the possibility of condensation, air out the RV occasionally during storage.
8. Be sure that both the chassis and auxiliary batteries have the proper electrolyte level and that they are fully charged. A discharged battery will freeze and crack the case. In storage, a battery will gradually loose charge after 30-45 days, even when disconnected by use of the battery disconnect switch. We recommend that you check the battery for charge once a month. If the charge is 80% or less, it must be recharged. You may wish to remove the battery and store it in a heated area. However, even when warm, the battery level must be maintained.
9. Be sure the tires are inflated to correct pressure and check periodically.
10. Keep the roof free from snow and ice. Check it periodically and after a heavysnowfall.
11. Winterize the water systems and protect exterior hoses and lines from freezing. Follow the winterizing procedure outlined in Section 5 of this manual. Also follow all component manufacturers instruction regarding their particular product. (If their procedure differs from this manual, follow the component manufacturers instructions.)

SECTION 7
CARE AND MAINTENANCE

STORAGE PREPARATION

When storing you RV for the winter, certain precautions need to be taken to protect your unit. Be sure to talk with your local dealer concerning any special requirements, for storage, in your particular geographic location. The following steps are general and your dealer can help you choose those which are most appropriate for your needs.

ITEM	EACH TRIP	EACH MONTH	3 MONTHS	6 MONTHS	EVERY YEAR	AS REQ.	PROCEDURE
FIBERGLASS EXTERIOR		X					WASH WITH WARM WATER AND MILD DETERGENT
				X			WAX WITH LIQUID OR PASTE WAX
ROOF AND ROOF COMPONENTS				X			INSPECT AND RESEAL AS NEEDED
					X		LUBRICATE ROOF VENT MECHANISM WITH LIGHT OIL AND CLEAN COMPLETELY
WINDOWS AND DOORS		X					CHECK VINYL SEALS WHEN WASHING EXTERIOR
			X				CHECK SEALS FOR DAMAGE AND REPAIR AS NEEDED
			X				LUBRICATE DOOR HINGES & STEP COMPONENTS WITH WD40
					X		ADJUST AND LUBRICATE WINDOW LATCHES WITH
					X		LUBE ALL DOOR LOCKS & STRIKE POCKETS
SEALS & ADHESIVES		X					INSPECT & RESEAL AS NECESSARY
LP GAS SYSTEM						X	CHECK FOR LEAKS AND ROAD DAMAGE
					X		HAVE QUALIFIED SERVICE CENTER CHECK PRESSURES AND COMPLETE SYSTEM
WATER & DRAINAGE		X					CHECK HOSES, FITTINGS & CONNECTIONS FOR LEAKS AND WEAR
	X						CHECK DRAINAGE SYSTEMS FOR LEAKS AND ROAD DAMAGE
						X	SANITIZE SYSTEM
					X		WINTERIZE SYSTEM DEPENDING ON LOCAL CONDITIONS
ELECTRICAL SYSTEM	X						CHECK GFCI CIRCUITS
						X	MAINTENANCE ON GENERATOR PER GENERATOR MANUAL
						X	CHECK AND SERVICE BATTERY/S
APPLIANCES	X						REMOVE FOOD & ICE FROM REFRIGERATOR AFTER EACH TRIP
		X					CLEAN FAN BLADES AND WASH FILTER ON RANGE EXHAUST HOOD
		X					CHECK FOR OBSTRUCTIONS & DIRT ON EXT. APPLIANCE VENTS
SAFETY EQUIPMENT					X		CLEAN ALL DETECTOR COMPONENTS
	X						TEST ALL DETECTOR COMPONENTS
		X					CHECK FIRE EXTGUISHER PRESSURE & CONDITION
CARPETING	X						VACUUM AFTER EACH TRIP
						X	CLEAN PER CARPET MANUFACTURERS INSTRUCTIONS
WOOD SURFACES		X					CLEAN PREFINISHED PANELS AND WOOD WITH WOOD CLEANER
SEATS						X	LUBRICATE ALL MECHANISMS AND INSPECT FOR PERPER OPERATION
						X	CHECK ALL SEAT BELT BUCKLES, RELEASE MECHANISMS & WEBBING
CHASSIS & COMPONENTS						X	FOLLOW CHASSIS LUBERICATION & MAINTENANCE PROCEDURES
WEIGHT & DISTRIBUTION	X						KEEP WITHIN SPECIFIED LOAD LIMITS
AXLES				X			TORQUE MOUNTING BOLTS TO 145-150 FOOT POUNDS
WHEEL BEARINGS					X	X	REPACK WHEEL BEARINGS YEARLY
BRAKES				X		X	CHECK OPERATION AND FOR UNEVEN WEAR

SECTION 7
CARE AND MAINTENANCE

FORMALDEHYDE FROM BUILDING MATERIALS

Certain building products such as particleboard, fiberboard and hardwood plywood are manufac-tured with an adhesive containing urea-formaldehyde. These products emit a small quantity of formaldehyde into the air.

Other products containing formaldehyde or urea-formaldehyde resins are some carpets, draperies, upholstery, fabrics, deodorizers, cosmetics and permanent press fabrics. Formaldehyde is also a by-product of combustion and is produced by cigarettes and gas appliances.

The concentration of formaldehyde in the indoor air depends upon the quantity and emission rates of all emission rates of all emitting products in the structure compared to the volume of indoor air and the fresh air ventilation rate. As with other indoor pollutants, ventilation should reduce formaldehyde levels.

⚠WARNING **FORMALDEHYDE LEVELS IN THE INDOOR AIR CAN CAUSE TEMPORARY EYE AND RESPIRATORY IRRITATION AND MAY AGGRAVATE RESPIRATORY CONDITIONS OR ALLERGIES.**

WATERPUR™

To help you choose quality water treatment products, the Water Quality Association developed its' Gold Seal program. WQA tests water treatment equipment and awards the Gold Seal only to those systems that meet or exceed industry standards for performance, capacity and integrity in removing a variety of drinking water contaminants. **WQA Gold Seal** testing and validation is available for drinking water treatment units. It provides the following assurances:

1. **Performance Testing** - measures contaminant reduction capabilities over the life and capacity of the unit.
2. **Structural Integrity** - measures durability under pressurization beyond the usual demands of home water systems, simulating 10 years of normal use.
3. **Materials Safety** - confirms a product does not add anything harmful to the water being treated.
4. **Literature Review** - verifies clarity and accuracy of product literature sales and advertising copy, installation and maintenance instructions, and product labeling.

'WARNING' **INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.**

NOTES:

SECTION 7
CARE AND MAINTENANCE

Gold Seal labeled products must meet the Water Quality Association's Code of Ethics standards. Only the Water Quality Association can award the Gold Seal, and only products meeting comprehensive industry standards can earn it.

LOOK FOR THE **GOLD SEAL** AND BUY WITH CONFIDENCE.
FOR MORE INFORMATION, WRITE:
WATER QUALITY ASSOCIATION
4151 NAPERVILLE RD.
LISLE, IL. 60532-1088
(A NOT-FOR-PROFIT ORGANIZATION.)
VISIT OUR WEBSITE AT: **www.wqa.org**

The **WaterPur™** Models CCI10CLW12 & CCI-5CLW12 have been tested and awarded the **WQA Gold Seal** certifying these systems meet or exceed industry standards for performance, capacity and integrity under WQA S-200 for Household and Commercial Water Filters.

OPERATING INSTRUCTIONS
MODEL CCI-10CLW12

The **WaterPur™** system filters all water going into your RV, not just drinking water, thereby protecting your complete plumbing system from contaminants, providing filtered cold **and** hot water, and providing filtered water to your bathroom. It also:

- removes over 99% of chlorine, taste and odor
- removes over 99% of turbidity
- removes over 99% of Giardia & Cryptosporidium
- does not channel, fluidize, or bypass like a granular activated carbon filter
- does not permit the passage of cultivated bacteria like a granular activated carbon filter
- does not contain silver nitrate or any other pesticide or harmful chemical
- is constructed from all NSF listed materials
- is rated for 10,000 gallons or one year
- has a flow rate of 2.5 gallons per minute

The **WaterPur™** cartridge is made of activated carbon particles fused into a uniform block, providing micron filtration. Service life is greatly extended by a 15 micron polypropylene prefiltration medium and a layer of 5 micron polypropylene melt blown intermediate filtration medium.

NOTES:

SECTION 7
CARE AND MAINTENANCE

The replaceable cartridge, which is the heart of the **WaterPur™** system, has been tested to meet the material requirements of NSF Standards 42, 53 and 58. It has been tested to meet the performance requirements of NSF Standard 42 for Class 1 Chlorine reduction and Standard 53 for Class 1 Turbidity and Cyst reduction.

Sanitize

Prior to using your RV's fresh water system with the **WaterPur™** CCI-10CLW12 installed, the entire system should be sanitized and rinsed. When sanitizing, make sure the **WaterPur™** filter cartridge is not in the filter housing.

- Place one ounce of household bleach (such as Clorox) in your RV's fresh water tank, for each ten gallons of capacity. (If your tank holds 30 gallons, put 3 ounces of bleach in the tank.) Fill your RV's fresh water tank with potable water.
- SLOWLY open the faucets in the RV and allow water to flow until you smell chlorine at each faucet, then close the faucet. DO NOT PERMIT THE CHLORINATED WATER TO SPLASH ONTO CLOTHES, WALLS, COUNTERS OR FLOORS. Allow the system to sit overnight.
- Drain the fresh water tank and fill with potable water. Run the faucets until the chlorine smell is gone. Repeat as necessary.
- Shut off the fresh water pump or disconnect from your city water supply. Open the kitchen faucets to remove pressure. Place a shallow pan beneath the **WaterPur™** filter.
- Remove the sump from the **WaterPur™** housing by turning counterclockwise being careful not to spill the water in the housing. Empty the water from the housing.
- Unwrap the **WaterPur™** cartridge and place it in the housing. (Either side up). Make certain that the 'O' ring is properly seated, and reattach the housing to the filter cap by turning clockwise. Tighten the housing firmly by hand. DO NOT overtighten.
- Close the kitchen faucets and either turn on your fresh water pump or your city water supply. Check for leaks at the filter housing. Tighten if necessary. Open the kitchen faucet and allow water to flow for ten minutes. Your **WaterPur™** system is now ready to deliver fresh tasting filtered water to all of the faucets in your RV!

Winterize

To winterize your RV's water system, remove the **WaterPur™** cartridge from the housing and follow manufacturer's directions for dewinterizing, then replace the **WaterPur™** cartridge. The cartridge should be replaced every 12 months or 10,000 gallons, whichever comes first.

An easy way to remember to do this is to replace the cartridge when you dewinterize in the spring. Replace the **WaterPur™** cartridge only with a genuine **WaterPur™** cartridge available from your Forest River Inc. dealer.

SECTION 7
CARE AND MAINTENANCE

Operational Note:
The **WaterPur™** cartridge is not to be autoclaved or steam sterilized. Use the **WaterPur™** cartridge with microbiologically safe water. Activated carbon filters are not designed to kill or remove bacterial or viruses. Actual results obtained will vary with various combinations of organic contaminants, changes in pH or other conditions encountered in actual use. All information presented is based on data believed to be reliable. It is offered for evaluation and verification, but is not to be considered a warranty of any kind. The contaminants removed by the **WaterPur™** cartridge are not necessarily in your water. Some jurisdictions tax, regulate, or restrict devices making health related or aesthetic claims. **WaterPur™** makes no claims in those jurisdictions.

WARRANTY
The **WaterPur™** system is warranted against defects in material and workmanship for a period of one year from date of purchase. Warranty does not cover damage due to abuse, neglect, improper installation, exposure to pressure or temperature above or below stated operating parameters, or improper winterizing.

The Seller makes no other warranties of any kind, expressed or implied, concerning this product, including warranties of merchantability or fitness for a particular purpose, except that this product should be capable of performing as described in this manual.

Seller's obligation for this product's performance below specifications shall be limited solely to the replacement of product proven defective, at the Seller's sole discretion. Determination of suitability of product for uses contemplated by Buyer, shall be the sole responsibility of Buyer. Use of this product constitutes Buyer's acceptance of this limited liability.

DESCRIPTION:
The **WaterPur™** Model CCI-10CLW12 is a Household Class, Group 2, water filtration device designed for installation in recreational vehicles. It has a micron rating of 1 micron, a capacity of 10,000 gallons of chlorine removal at 2.5 gallons per minute. This capacity was determined under WQA Standard S-200 Test Conditions, and may vary with local water characteristics.

The cartridge consists of activated carbon particles fused into a uniform block with enhanced absorptive capacity and efficiency. The cartridge flows in a radial outside-to-inside direction providing increased dirt capacity and low pressure drop (8 psid @ 1 gpm service flow, maximum differential pressure of 100 psid and a collapse pressure of 200 psid).

Unlike granular activated carbon (GAC) filters, the extruded carbon will not channel or bypass, due to the extreme uniformity of its extruded activated carbon core. Service life is greatly extended by a layer of 15 micron polypropylene spun-bonded prefiltration medium and a second layer of 5 micron polypropylene melt blown filter medium.

Maximum cartridge operating pressure is 125 psid and maximum operating temperature is 125° F. Minimum operating temperature is 40^0 F. The housing and cartridge are constructed of 100% NSF listed materials.

SECTION 7
CARE AND MAINTENANCE

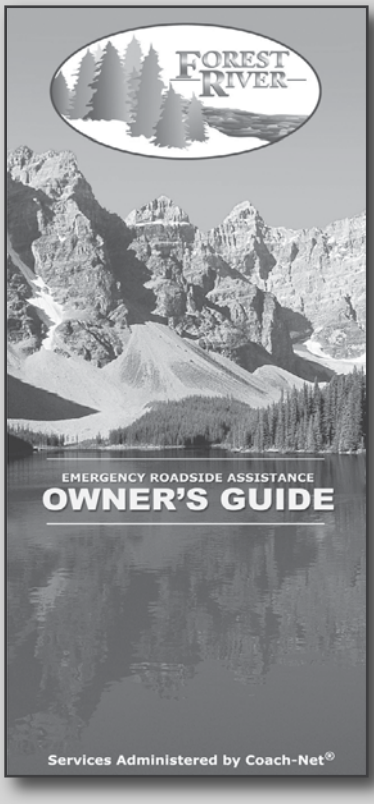
FOREST RIVER'S CUSTOMER 'EMERGENCY ROADSIDE ASSISTANCE' OWNER'S GUIDE

THIS INFORMATION AND SERVICE IS PROVIDED BY:

Coach-Net®
900 N. LAKE HAVASU AVENUE
LAKE HAVASU CITY, AZ. 86403
1-877-801-0333

Coach-Net®
Technical & Roadside Assistance

WHEN YOU TAKE DELIVERY OF YOUR NEW FOREST RIVER INC. RECREATIONAL VEHICLE, YOU ARE PROVIDED WITH AN EMERGENCY ROADSIDE ASSISTANCE SERVICE - FREE OF CHARGE. WE'VE TEAMED UP WITH THE LARGEST RV EMERGENCY ROADSIDE ASSISTANCE COMPANY IN THE COUNTRY TO GIVE YOU IMMEDIATE ACCESS TO FAST, DEPENDABLE SERVICE WHEN AND WHERE YOU NEED IT. THIS IS A COMPREHENSIVE EMERGENCY ROADSIDE SERVICE THAT IS AVAILABLE TO YOU AROUND THE CLOCK.



FOREST RIVER

This Owner's Guide is provided to familiarize you with the benefits provided at no charge for your first year of ownership from the date of purchase.

For further details and instructions on how to access your Forest River Emergency Roadside Assistance and Product Support Plan benefits, please refer to your Benefit Guide or call **1-877-801-0333.**

You may continue your Forest River Roadside Assistance benefits in following years for a nominal charge.

Exclusive Benefits

EMERGENCY ROADSIDE ASSISTANCE
Simply show your Forest River Roadside Assistance card for payment of covered benefits with no out-of-pocket expense throughout the U.S. and Canada. (Includes one additional family car!) Free jump-starts, tire changes, fuel delivery and lock out service.

SERVICE ASSISTANCE
We offer over 6,800 qualified service agencies throughout North America. A simple phone call gives you expert direction on where the closest qualified service agency is located.

NATIONWIDE SERVICE APPOINTMENT ASSISTANCE
Here's a "no-hassle" way of arranging a service appointment when and where you travel. We make an appointment for you, give you directions and the time that fits your schedule. We're a toll-free call away!

MOBILE MECHANIC
We will dispatch a mechanic to the site of your mechanically disabled vehicle.* Labor charges and parts are not covered.

* Except where prohibited by warranty

$2000 TRIP INTERRUPTION REIMBURSEMENT
Getting in an accident while traveling in your RV means you're stuck. We take care of you by paying for a car rental, meals and lodging. Even helping with a plane ticket home.

24-HOUR TOLL-FREE EMERGENCY MESSAGE SERVICE
Stay in touch with family and friends with no cost emergency message service.

CUSTOM TRIP ROUTING AND FULL COLOR MAPS
Make your next trip more enjoyable with these easy to follow maps, travel tips, places to see and much more.

For further details and instructions on how to access your Emergency Roadside Assistance and Product Support Plan benefits, please refer to your Benefit Guide or call **1-877-801-0333.**

FOREST RIVER

When you take delivery of your new recreational vehicle it's just the beginning of our exclusive around the clock Emergency Roadside Assistance and Product Support Plan.

Our extensive support plan provides complete roadside assistance, emergency road service and special motor club benefits that follow you wherever your travels take you! (Just show your card and go!)

We've teamed up with the largest RV emergency roadside assistance company in the country to give you immediate access to fast, dependable service when and where you need it.

Add to that our toll-free warranty and service appointment assistance, plus a technical assistance hotline and you have the security of full-time support at your fingertips wherever the open road leads you. We provide full-time security you would never want to be without!

SECTION 7
CARE AND MAINTENANCE

MAINTENANCE / REPAIR SCHEDULE	SERVICE CENTER NAME / ADDRESS

SECTION 7
CARE AND MAINTENANCE

MAINTENANCE/SERVICE DATE and PROCEDURE	SERVICE CENTER NAME, ADDRESS and TELEPHONE NUMBER	TRAVEL JOURNAL

PO Box 3030

55740 County Road One

Elkhart, IN 46515-3030

WWW.FORESTRIVERINC.COM

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A Berkshire Hathaway company.

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